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# Assessment of tomato's color extraction of paste juice factories wastages through solvent

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Carotenoids are responsible for tomato's color. Lycopene forms 93 percents of all carotenoids existing in tomato and has physiological effects and decreases risk of cancer. Lycopene is a fat soluble caroten. Carotenoids color varies between orange and red. Natural colors have received particular attention recently due to adverse health effect of synthetic and artificial colors, thus extraction of tomato's carotenoids and its use as a natural red color in food is important .Three non polar petroleum ether solvents with boiling point of 55 , N- Hexan with boiling point of 60 and mixture of solvent (N-Hexan, Ethanol, Sten) with ratio of (1:1:2) by boiling point of 50 in three periods and two temperatures are used to determine best conditions of extraction procedure by solvent. Extraction by solvents mixture in boiling point and extraction period of 6 hours differs significantly from other treatments in terms of color extraction ($p<0.05$) thus it was selected as the best conditions for extraction. Four volumes of solvents were considered in extraction procedure and an equal volume of solvent and sample was determined as the best ratio in terms of color extraction.

**Keywords:** Carotenoids; Tomato; Extraction by solvent

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