



CHEMICAL CHARACTERIZATION OF TOMATO POMACE

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Abstract: *Tomatoes (*Solanum lycopersicum*) are a good source of antioxidant compounds (lycopene, potassium, iron, folate and vitamin C). Tomato pomace is also known as food waste. Tomato pomace was analyzed for total antioxidant capacity (TAC) by FRAP assay according to the method described by Benzie and Strain and the total polyphenolic compounds content (TP) by Folin-Ciocalteu method developed by Singleton and Rossi. Ascorbic acid (Vitamin C) was extracted by titration with a 2,6-dichlorophenolindophenol sodium. Lycopene was extracted following the method of Sharma and Le Maquer. The aim of this paper is to evaluate the chemical composition of tomato pomace obtained as a result of industrial processing of tomato paste.*

• Introduction

About 80% of the tomatoes produced are consumed in processed form as tomato paste, tomato puree, tomato juice, ketchup and sauce. The by-product resulting of tomato processing is represented by tomato pomace. It consists of the skin and seeds.

• Material and method

The tomato pomace samples were read at $\lambda = 593$ nm for TAC respectively $\lambda = 725$ nm for TP; were using a UV-VIS SPECORD 205 spectrophotometer from Analytik Jena. Lycopene was extracted with a mixture of hexane:ethanol:acetone (2:1:1) (v/v) and absorbance was measured at 502 nm using hexane as a blank.

• Results and discussions

Tomato pomace contains high levels of bioactive compounds can be reused as natural antioxidants in vary foods products. Lycopene is one of the main carotenoids in vegetables but the lycopene levels may be reduced by thermal processing (cooking, blanching, pasteurization, drying and frying).

• Conclusions

The results of this study suggest that the composition of tomato waste, especially the peel fraction of tomatoes, is very rich in bioactive compounds that can be used mainly as natural antioxidants in food products.