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Efficiency of Microwave Irradiation on Volarization of Beetroot (*Beta vulgaris* L.) Waste

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Food waste treatment for bioactive compounds volarization and their potential application in food industries have been fulfilled recently. Despite the high instability of bio colors, the substitution of artificial dyes with them can balance their application in addressing health problems. This study focused on the efficiency of microwave treatment on the extractability of bioactive compounds from Cylindra type beetroot (*Beta vulgaris* L.) peel by 15% aqueous ethanol. The extraction process was designed by the central composite design of response surface methodology with four factors and three variables. Those experimental factors were microwave power (100-800 W), extraction time (30-150 s), peel-to-solvent ratio (0.1-0.2 w/v), and ascorbic acid percent (0.1-0.5 %). Among thirty experimental runs, the highest observed values of corresponding responses were as follows: total betalains (1.94 mg/g of FW), total phenolic compounds (43.78 mg/g of FW), and total antioxidants (61.58 mg/g of FW), respectively. The need for thorough research to innovate the bioactive compound extraction using microwave seems to be efficient as the microwave extracts revealed desirable amounts of specific bioactive compounds therein.