

**INFLUENCE OF EXTRACTION CYCLES ON THE CONTENT OF TOTAL ANTHOCYANINS DERIVED FROM PURPLE ONION PEEL**

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Anthocyanins are natural pigments responsible for the blue, violet and red color present in several plants. This compound is classified as a flavonoid and can act as an antioxidant and metal chelating agent. The peel of purple onion is a food residue that has great potential for use due to its content of antioxidant compounds, mainly quercetins and anthocyanins, which can be extracted and applied in the development of new products. The aim of this study is to determine the number of extraction cycles required to obtain an extract with a high content of total anthocyanins from the purple onion peel (POP). The peels were obtained from traders from Rio Grande – RS where, 5 g of POP were homogenized with 50 mL of acidified 70% ethanol (pH 2) in shaker at 150 rpm and 25°C for 1 h. Subsequently, the contents were centrifuged and vacuum filtered, obtaining the extract from the first extraction cycle. The solid residue of POP collected after filtration was resubmitted to the extraction process two more times under the same conditions previously mentioned, obtaining the extracts from the second and third extraction cycles, composed of the extract from the current cycle and the previous cycle. The quantifications of the total anthocyanins (AT) of the three extracts obtained were determined by the differential pH method. It was observed that the levels of total anthocyanins present in the extract obtained in the second extraction cycle were 379.10 mg AT 100 g<sup>-1</sup>, the highest content being compared to the first and third extraction cycles, with values of 226.43 and 276.54 mg AT 100 g<sup>-1</sup>, respectively. After the extraction of the plant matrix, the anthocyanins are more exposed and susceptible to degradation, causing a reduction in their content during the extraction cycles. Therefore, two extraction cycles are sufficient to obtain an extract of the purple onion peel with a higher anthocyanin content.

**Keywords:** Challenges in the analysis of bioactive compounds, Phenolics compounds, Food waste, Biocompounds, Natural pigment.

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