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Multivariate Analysis Of The Effect Of Different Pre-Treatment Methods Before Drying On Some Quality Properties Of Potato

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Abstract

In this study, it was aimed to investigate the physicochemical properties of potato powder obtained from different pre-gelatinization processes applied to yellow-fleshed potato. Steam , microwave , ultrasonication, and thermosonication blanching were applied as pre-gelatinization processes. A control sample dried at 55°C, without any pretreatment, was taken as a reference to compare the effect of the treatments on physicochemical properties. Total phenolic content, antioxidant activity, color, water activity, ash and moisture content were analyzed in potato powders dried at 55°C after preliminary gelatinization processes. It was observed that pre-treatments caused a decrease in bioactive substance content while improving color values. Moreover, each of the different pregelatinization treatments gave different results. Steam blanching was the closest to the control sample in terms of preservation of bioactive components and ash content. This is considered an important study in terms of adding new information to the literature with the results obtained using different pregelatinization techniques on potatoes.

Key Words: *Potato, pre-gelatinization, bioactive compound, color, drying*

