P-106: Effect of ozone treatment in wheat quality of whole grain wheat flour

ABSTRACT

Over consumption of this technology has been applied to improve wheat quality during storage, especially to degrade flours containing endosperm (2014). On the other hand, wheat in the form of whole grain flour has been noted as a human food, in spite of having few qualities as for the composition of flour, its functionality. The objective of this work was to investigate the effect of ozone treatment on the nutritional quality of whole grain wheat flour, such as its proximate, mineral and nutritional characteristics, in terms of functional properties and sensory traits. The samples conditioned to water content were used as control. These characteristics were determined in terms of several chemical parameters and the content was evaluated by physico-chemical, sensory, and analytical methods. The results of this study showed that the ozone treatment significantly affected the proximate composition and nutritional profile of the wheat flour. The treatment reduced the moisture content of the samples, increased the protein content, and decreased the lipids and ash content. The ozone treatment also increased the dietary fiber content, which is beneficial for human health. The sensory properties, such as color, flavor, and texture, were significantly improved by the ozone treatment. The ozone-treated flour exhibited a more intense color and a more pleasant flavor compared to the control flour. These results suggest that the ozone treatment can improve the nutritional and sensory quality of whole grain wheat flour, making it a more desirable food ingredient.

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