

BREAD WITH STONED TABLE OLIVES – THE UNION OF TWO TRADITIONAL PRODUCTS OF EXCELLENCE OF TRÁS-OS-MONTES REGION, PORTUGAL: PRELIMINARY RESULTS

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I. INTRODUCTION AND OBJECTIVES

Bread is fundamental for the diet of worldwide, being its main ingredients flour, water, yeast and salt (GOESAERT et al., 2005). Globally there are several types of bread, to which several ingredients can be added. Stoned table olives, called "alcaparras" (Figure 1), are one of those possibilities. "Alcaparras" are processed from healthy olives that are broken to separate the kernel of the flesh. The pulp is placed into water to remove its bitterness. Subsequently, they are stored in salt water. (SOUZA et al., 2008). These stoned table olives are a typical product of Trás-os-Montes region. Thus, the main objective of this study was to develop and characterize in chemical terms wheat bread with stoned table olives, following the traditional recipe of the Transmontano bread, associating this way two excellent products of Trás-os-Montes region, northeast of Portugal.



Figure 1: Stoned table olives, "Alcaparras"

II. MATERIAL AND METHODS

Wheat breads were prepared with 0, 3, 5 and 7% stoned table olives (Figure 2) and stored at 25 °C for 4 days. The analysis made were: pH, ash, fat and salt contents, as well as mesophiles, molds and yeasts. The chemical determinations were made only at 0 and 2 days because after the fourth day the bread had developed mold.

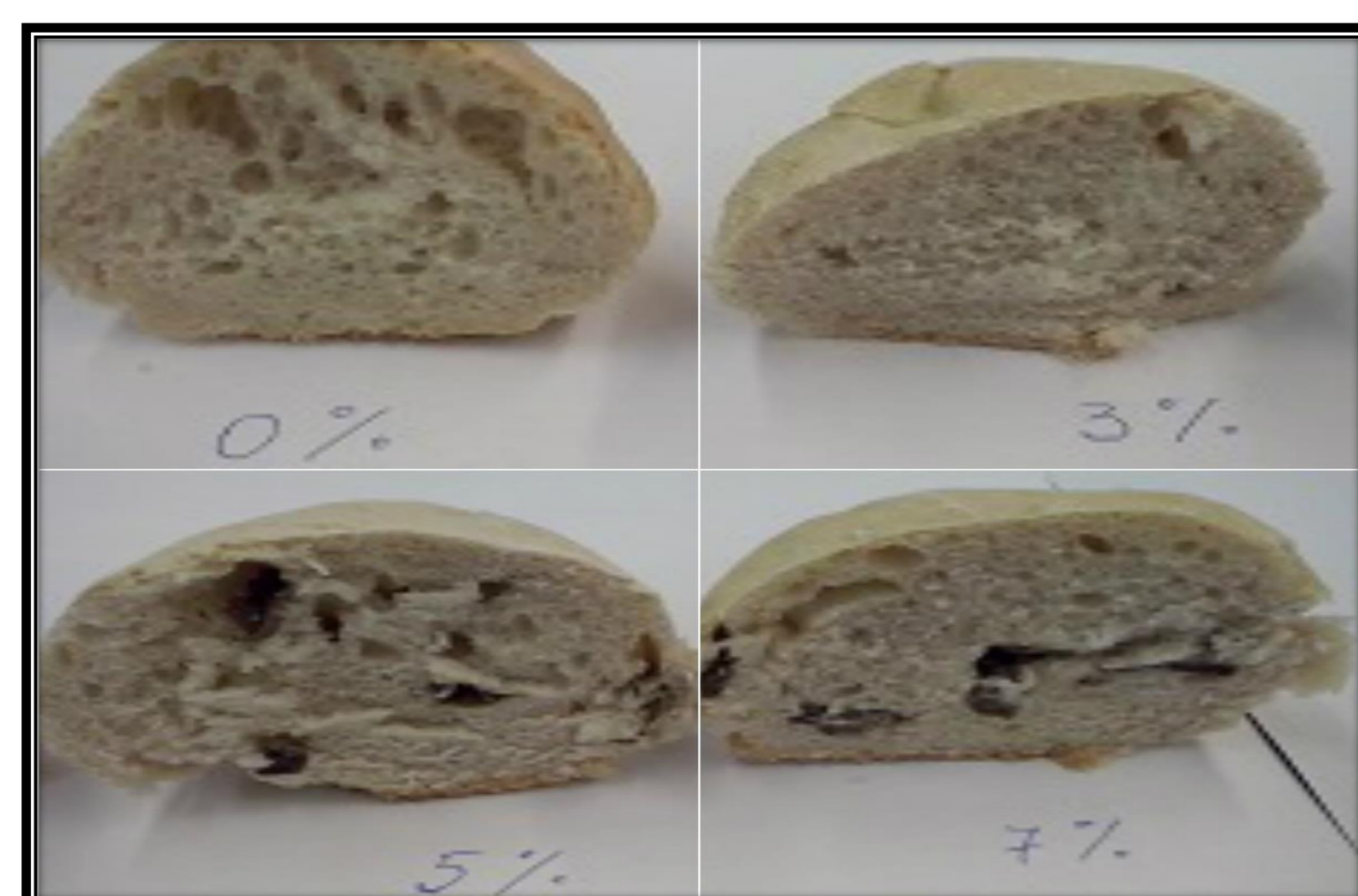


Figure 2: Transmontano bread with different percentages of stoned table olives

III. RESULTS AND DISCUSSION

Figure 3 shows the results of pH, salt, ash and fat contents (expressed in dry weight) of bread formulations with 0, 3, 5 and 7% stoned table olives, right after the end of the preparation and after 2 days of storage.

With the increase of the percentage of stoned table olives, "alcaparras", a decrease in pH was observed. Concerning ash and fat, the values ranged between 2.13-2.77% (d.w.) and 2.00 and 3.78% (d.w.), respectively. It was observed an increase in these values with the addition of stoned table olives. The salt content was also different among the samples, having the largest value be found in the bread with 7% of stoned table olives. These results can be explained by the high salt content of these olives.

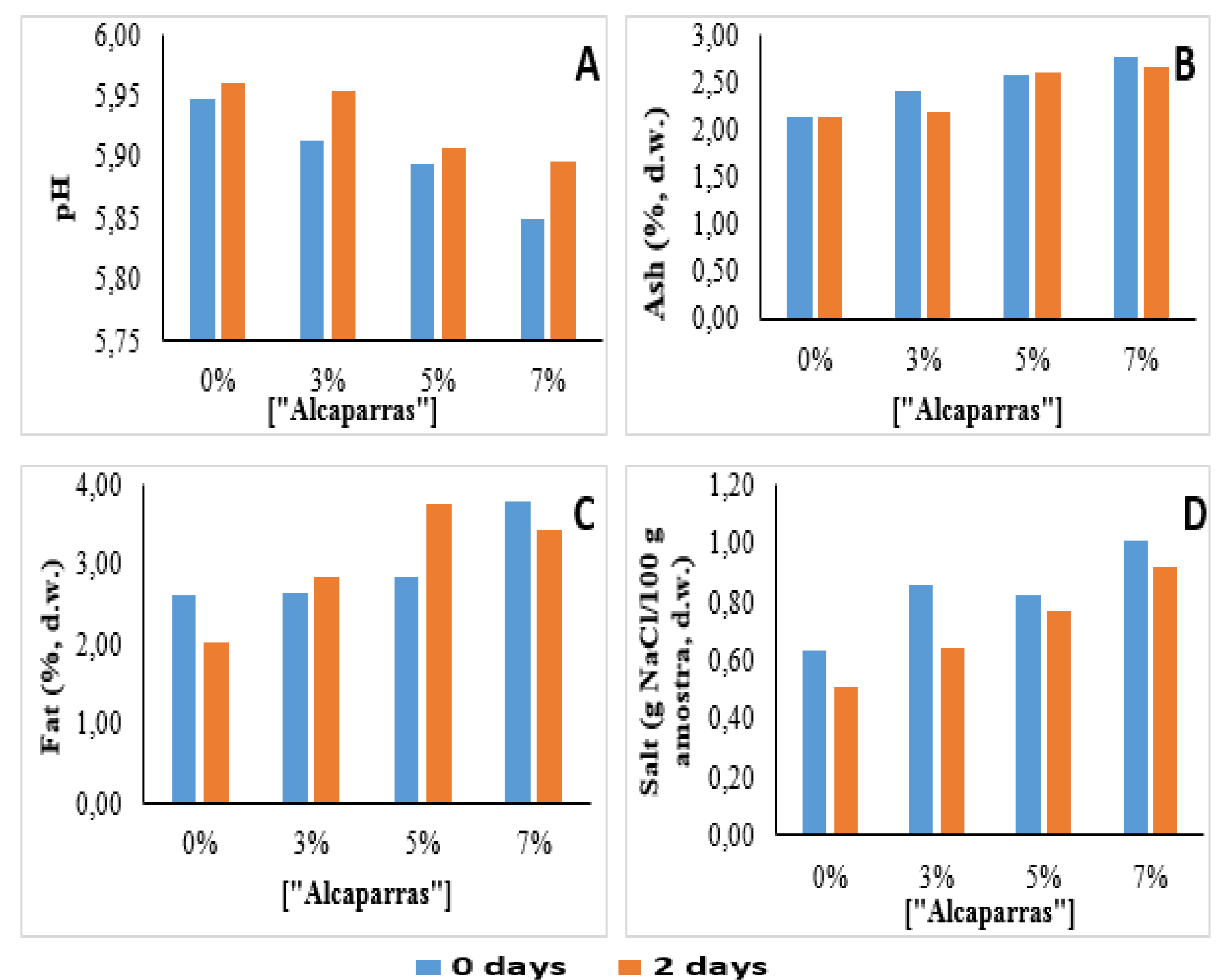


Figure 3: Chemical parameters determined in the breads with stoned table olives ("alcaparras") (0, 3, 5 and 7%) at 0 and 2 days of storage: A) pH; B) Ash; C) Fat; and D) Salt

Regarding the microbiological results, at time zero (confection day of the bread), the microbial population was similar in all analyzed breads; however, from time zero to the second day, there was a significant increase in the mesophilic microorganisms and yeasts and molds counts. On the fourth day the values were considered unsatisfactory for the microorganisms analyzed.

IV. CONCLUSIONS

In conclusion, the bread with 7% stoned table olives showed lower pH values and higher ash, fat and salt contents. In relation to shelf-life, the results suggested 2 days, once the bread was still found acceptable, while after 4 days molds were already detected on bread surface (unsatisfactory result).

V. REFERENCES

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