

INFLUENCE OF STORAGE TIME AND FORMULATION ON THE ACCEPTABILITY OF "TORTILLAS" MADE WITH WHEAT AND AMARANTH FLOUR

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INTRODUCTION

In recent years, many factors have influenced the dietary habits of the Argentine population had change unfavorably, being the argentine diet monotonous, with few healthy habits and childhood obesity is increasing. One of the possibilities available in this case is to add a healthy ingredient in baked goods that are highly consumed in this country, in such a way as increase the nutritional value of a mass consumption product. The amaranth grain, as well as quinoa, is considered a pseudo-cereal, because it has properties similar to those of cereals, but botanically it is not. Amaranth protein is of excellent quality dew to it has an almost perfect balance of aminoacids to form protein, being superior to that offered by the proteinaceous content of milk.

OBJETIVE

The objective of this work was to evaluate the acceptability by consumers in Buenos Aires, of "tortillas" made with wheat flour and "tortillas" fortified with amaranth flour, stored for four different times.

MATERIALS AND METHODOLOGY

➤ The manufacture of the precooked "tortillas" was carried out in a bakery company in Buenos Aires, Argentina, using the bakery formulation, which is a formula that, contrary to the idea of expressing the percentages based on the total volume (or weight), is made based on the weight of flour used, which is taken as 100. The "tortilla" treatments corresponded to: Treatment 1 (T1) (100% wheat flour) and Treatment 2 (T2) "tortillas" with 86% wheat flour and 14% amaranth flour). The "tortillas" were stored at a temperature of 20°C for four different times (10, 20, 27 and 35 days), with time number 3 being the established commercial shelf life (27 days). The time 4 (35 days), corresponds to 10 days after the expiration date, which is selected to evaluate the behavior of the shelf life.

➤ All samples had the same day of preparation and were frozen at each established time. A total of 8 samples were analyzed (2 treatments x 4 storage times), which were presented in small triangular-shaped portions, each filled with mozzarella cheese. They were coded with a random three-digit number, evaluated at a temperature of approximately 20/24 °C, in a sequential monadic display and statistically balanced in their presentation. Acceptability was determined with a structured scale of 7 points, as well as global assessment and purchase intention of the two types of tortillas in the four times of shelf life. Data were statistically analyzed with SAS software, using procedure GLM and Tukey's test for mean difference (α : 0.05).

RESULTS AND DISCUSSION

For the treatments according to each time, the acceptability values were the following: (T.1 (wheat) 4.8; 4.69; 4.68 and 4.46 and T2 (wheat + amaranth) 4.84; 4.54; 4.74 and 4.63), no significant differences were observed ($p > 0.05$) (Figure 1). In terms of acceptability, global assessment and purchase intention, there were no significant differences between both treatments or during storage time ($p > 0.05$). The sensory characteristics of the two treatments were not accepted differently and neither were they on day 35 of storage were negatively influenced by time, therefore, an extension of the commercial shelf life can be considered

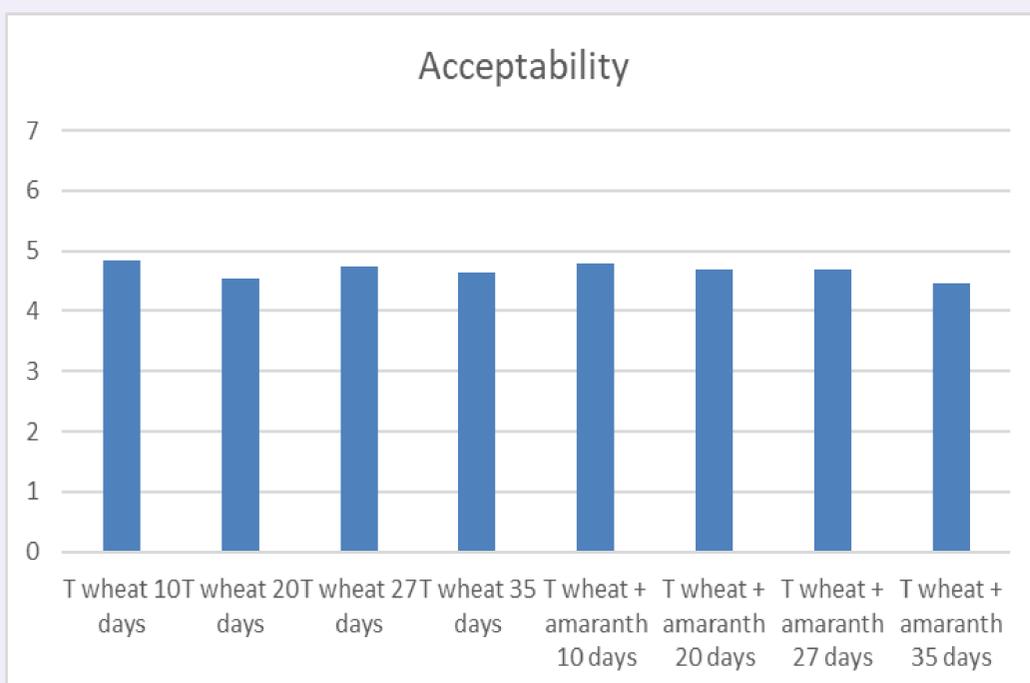


Figure 1



CONCLUSION

When observing that the acceptability of the tortillas was not affected by the storage time or by the inclusion of an alternative flour (which is not common to the palate of argentine consumers), a door is opened to the possibility of addition of this cereal to the diet of the argentines, who would not reject the product, and in this way, a variety of vitamins and minerals typical of this cereal could be incorporated and that could improve the health of the human organism.