

INTRODUCTION

Biscuits have a high susceptibility to **lipid oxidation**. Consumers are increasingly asking for more “clean label” products and it is necessary to look for an alternative to the E numbers, among which are the antioxidants most used in biscuits. Reddy *et al.* (2005) determined the oxidation of biscuits enriched with different antioxidants with promising results. The company Polypan Group S.A. has developed a natural citrus extract, called **Flavomix® AX200**, which has strong antioxidant properties, and it is composed of maltodextrin and citrus extract.

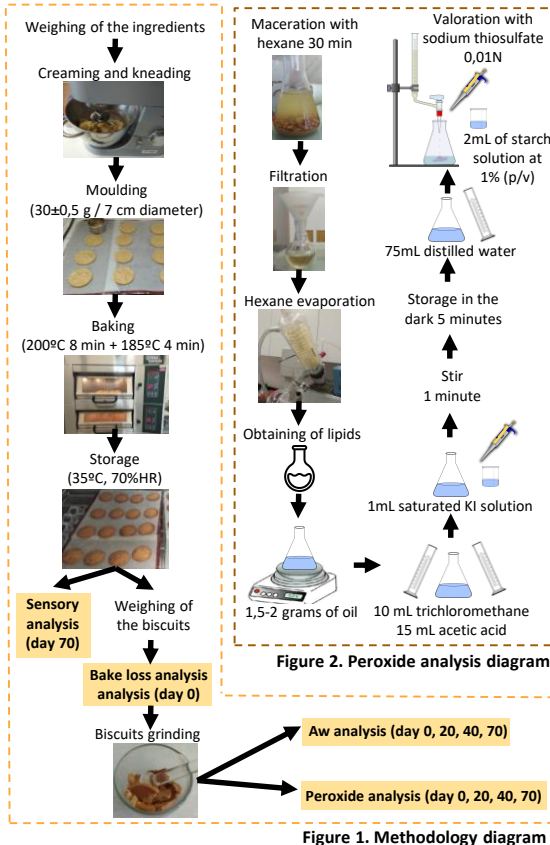
OBJECTIVES

- To study the antioxidant effect of Flavomix® AX200 in rotary biscuits.
- To compare the antioxidant effect of Flavomix® AX200 with tocopherol.
- To analyze if it is possible to substitute one for the other and if it is a good alternative.

REFERENCES

- Huang S-W, Frankel EN, German JB. 1994 Oct 1. *J Ag Food Chem.* 42(10): 2108–2114.
 Karimi S. 2021 Abr 29. *Int J Nut Food Sci.* 10(2): 54-58.
 Reddy V, Urooj A, Kumar A. 2005 Mar. *Food Chem.* 90(1-2): 317-321.

METHODOLOGY



RESULTS AND DISCUSSION

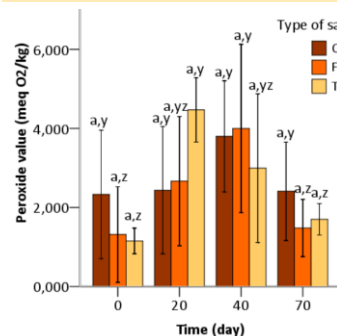


Figure 3. Evolution of the peroxide value

- No differences in bake loss were found.
- Aw results indicate that Flavomix® AX200 could have a better water retention due to its maltodextrin content (Karimi, 2021).
- The reduction of peroxide value on day 70 could be related to secondary oxidation (Huang *et al.*, 1994).
- Consumers detected a more intense rancid flavor in Flavomix® AX200 biscuits, and only a 16,92% of them selected this biscuit as the most preferred.

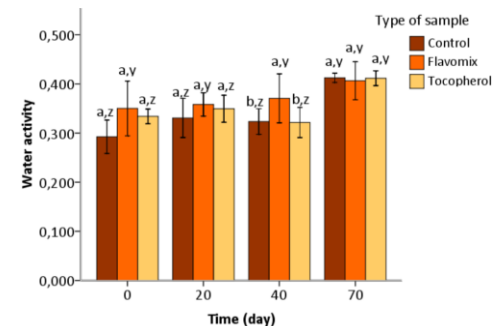


Figure 4. Evolution of the water activity

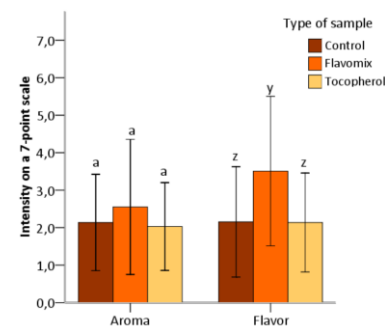


Figure 5. Sensory evaluation of rancid aroma and flavor

CONCLUSIONS

In conclusion, the antioxidants evaluated do not act as antioxidants in rotary biscuits in the conditions studied. Due to the high variability of the results, more studies are needed to determine if Flavomix® AX200 is a good alternative.