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## **Interaction effects of fermentation time and sourdough content on the size and acidity in bread**

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### **Abstract**

The use of sourdough to provide certain physical, organoleptic and nutritional properties to bread is one of the most used biotechnological processes in the production of cereal-based foods. Sourdough, yeast and fermentation time are elements that provide rising to the bread, in addition to aroma, flavour and nutritional properties. The time of fermentation of the dough before baking and the portion of sourdough added in the dough pieces are decisive on the acids formation by microbiological action, and thus, the properties of the bread. The physical aspect is also an important factor in the final product, and it can be widely affected according to the percentage of sourdough used and the fermentation time prior to baking. This is due to the variation in the rheological properties of the dough and possibly to the competition existing in the microbiota development.

In this work, the interaction effects of fermentation time and sourdough content on the size and acidity in bread are assessed. For this purpose, bread samples were prepared with a fixed amount of yeast and 0, 20 and 50% sourdough portions. Afterwards, they were allowed to ferment periods of 0, 60, 120, 180, 240, 300 and 360 minutes before being baked. The results obtained are reported in the present work.