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## The impact of refreshment procedures adopted on the chemical and sensory quality of sourdough obtained by different raw materials: Mexican pulque vs. Tuscan sourdough

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One of the oldest biotechnological processes in traditional cereal food production is the use of sourdough as biological leavening agent. When used in optimized proportions, the sourdough can improve volume, texture, flavor, nutritional value of bread and increase its shelf life by retarding the staling process and by protecting it from microbial spoilage. The main purpose of the experimental work was to show how the production technology affects the sourdough characteristics and then the final product. In particular, three different Mexican sourdoughs obtained from pulque's sediment (xaxtle), kindly provided by Instituto Politécnico Nacional - Mexico City were analyzed as a function of their technological attitude for bread making. The best of them has been selected and stored according to the protocol traditionally used for the production of the Tuscan Sourdough Bread PDO (protected designation of origin). After a period of five weeks of back-slopping, the breads obtained by applying the same baking procedure to both starter doughs (Mexican vs. Tuscan) were compared. Despite the initial differences showed by the Mexican sourdough and the Tuscan one, chemical indexes obtained after the period of five weeks of back-slopping became similar confirming the role of the technology on the composition of the microflora in the leavening agent. Moreover the obtained breads did not show statistically significant differences from compositional chemical and sensory point of view and this shows the importance of the adopted operating conditions (back-slopping, stored and bakery protocols) for the quality of bread.

## Biography

Isabella Taglieri has obtained her degree in Chemistry at the University of Rome. After an experience in Indoor Risk Chemical Assessment and Forensic Toxicology, she is currently working in the laboratory of Food Technology at the Department of Agriculture, Food and Environment of the University of Pisa. She has practice in chemical, microbiological and sensory analysis of food matrices and is currently engaged in various research projects, with particular reference to Food Technology.

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