NITRATES REPLACEMENT WITH NATURAL ANTIOXIDANT IN CINTA SENESE SEMI-RIPENED SALAMI (S4P04)

C. Aquilani†, F. Sirtori, O. Franci, R. Bozzi, C. Pugliese Carolina

Department of Agrifood Production and Environmental Sciences, School of Agriculture, University of Florence, Italy.
† chiara.aquilani@unifi.it

In the last decades, concerns about meat and processed meat consumption raised due to their correlation with the onset of several diseases; till, in 2015, WHO classified processed meat products carcinogenic to humans, including them in Group 1. Indeed, in these products, the use of nitrites and nitrates promotes the formation of nitrosamines that are considered harmful compounds. To address the consumer's demand for healthier products, a solution has been identified in replacing nitrates and nitrites with natural antioxidants as food preservatives. So, 3 types of traditional fermented salami were manufactured and analyzed in this study. Group C (n=6) was made by adding 30 ppm of nitrates; group A (n=6) was made replacing the nitrates with a mixture of grape seed extract and olive pomace; group B (n=6) was made using a mixture of chestnut and olive pomace as nitrates replacement. Preliminary analysis on salami were carried out for fatty acids (FA) profile, lipid and cholesterol content. Moreover, a trained panel of 8 judges performed a quantitative-descriptive sensorial analysis. Results showed that, although the addition of an oleaginous element like the mixtures, no relevant modifications were observed in the total lipid content. Similarly, the FA profile of A, B and C was equivalent with the only exception of the arachidonic FA, which resulted significantly higher in A and B salami, likely due to the presence of the olive pomace. As no significant differences were found in FA profile as well as for SFA, also the cholesterol content resulted similar for all the treatments. Concerning the sensory analysis, among the attributes (oiliness, abnormal colors, texture, color uniformity, characteristic flavor, off flavor, salty, rancid, abnormal flavor, hardiness, juiciness), only for texture and color uniformity, judges assessed significant differences, being the former lower scored in A group respect to B; while for the latter, C sausages resulted in a better score than A and B ones. In conclusion, preliminary results showed that both the mixtures had not caused any significant change on lipid-correlated attributes of

salami, as well as no important sensorial attributes resulted to be affected by the replacement.

Keywords: Grape seed extract; chestnut extract; fat; fatty acid profile; cholesterol

Acknowledgments: This work has been made in the scope of Treasure project. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 634476 (Project acronym: TREASURE). The content of this paper reflects only the author's view and the European Union Agency is not responsible for any use that may be made of the information it contains.