

ProCured - Optimization Of The Salting Process For The Production Of Healthier And Higher Quality Dry-Cured Meat Products With Reduced And More Standardized Salt Content



Dry-cured meat production is an important area within the European meat processing industry. Beyond its economic and cultural dimension, dry-cured products play an important nutritional role in many European regions, being a high quality source of mineral salts, vitamins, and easily digestible proteins – favoured by natural proteolysis that takes place during curing. Moreover, many dry-cured products, are characterized by a high content of unsaturated fatty acids in their lipid fraction (such as oleic acid), which are known to have a positive role in preventing cardiovascular pathologies. Such unique and well-balanced nutritional properties, together with a long tradition and cultural value, have turned dry-cured ham into an emblematic representative of the Mediterranean diet, which in 2010 was included by the UNESCO in the List of the Intangible Cultural Heritage of Humanity.

In spite of their overall nutritional and gastronomic properties, the high sodium content in dry-cured products has become a major concern in terms of public health, because of the well-established relation between the salt intake, hypertension and associated vascular diseases. Moreover, the sodium content in only 100 grams of dry-cured meat already is already above the maximum daily intake recommended by the WHO. In this context, meat processors are increasingly interested in new technologies to produce dry-cured meat products with reduced salt content.

Nevertheless, the development of reduced sodium content dry-cured meat products has proved to be a major technological challenge for the sector, mainly due to the variability of raw meat characteristics, and to quantitatively understand how they influence the salt content in the final product. In particular, the weight of the meat piece, its water holding capacity, and its fat content, are important parameters that condition the salt uptake process. Nowadays, the sector lacks effective technologies to monitor these parameters, to optimize the salting process and to reduce the salt content in dry-cured meat products.

In the framework of the European Project ProCured (www.procured.eu), we have developed different technologies that allow monitoring raw meat properties in meat processing plants, on a piece to piece basis. Based on the information provided by these new inspection systems, we have developed mathematical models that allow setting the optimum salting conditions to consistently obtain dry-cured meat products with reduced salt content.



ProCured technology will allow meat processors to improve the homogeneity of their products, enabling them to elaborate dry-cured meat products with reduced salt content, in compliance with the Directive 1924/2006.

The project ProCured has been led by the company Lenz Instruments, S.L. The technology developed in the project has been validated at the industrial production scale in collaboration with dry-cured ham producers from Spain (Jamones Centellas) and Italy (Fratelli Galloni). The project consortium involved also academic partners (SSICA and IRTA), and industrial partners (Roser, Stevia, and Strasser)

ProCured Facts

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Partners

LENZ - Lenz Instruments S.L. - Spain (Project Coordinator)

STRASSER - Strasser Ges.m.b.H & Co KG - Austria

ROSER - Roser Construcciones Metalicas, S.A. - Spain

STEVIA - STEVIA KFT - Hungary

CENT – Jamones Centelles S.A. - Spain

GALLONI - F.LLI GALLONI SpA - Italy

IRTA - Institut de Recerca i Tecnologia Agroalimentàries - Spain

ATEKNEA SOLUTIONS CATALONIA (ATEKNEA) – Spain

SSICA - Stazione Sperimentale per l'Industria delle Conserve Alimentari - Italy

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