

Accepted Manuscript

Changes in proteolysis during the dry-cured processing of refrigerated and frozen loin

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PII: S0023-6438(18)30513-9

DOI: [10.1016/j.lwt.2018.06.002](https://doi.org/10.1016/j.lwt.2018.06.002)

Reference: YFSTL 7186

To appear in: *LWT - Food Science and Technology*

Received Date: 19 October 2017

Revised Date: 31 May 2018

Accepted Date: 2 June 2018

Please cite this article as: Abellán, A., Salazar, E., Vázquez, J., Cayuela, José.Ma., Tejada, L., Changes in proteolysis during the dry-cured processing of refrigerated and frozen loin, *LWT - Food Science and Technology* (2018), doi: 10.1016/j.lwt.2018.06.002.

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1 **Changes in proteolysis during the dry-cured processing of refrigerated and frozen loin**

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6 **Abstract**

7 The influence of frozen storage of dry-cured loin before its processing has been evaluated in terms
8 of proteolysis, pH, dry matter (DM), NaCl and sensorial acceptance. The frozen storage did not
9 affect total nitrogen (TN), non-protein nitrogen (NPN), or proteolysis index (PI), showing values at
10 day 50 of 1.14 and 1.11 g nitrogen/kg of DM; 0.093 and 0.091 g nitrogen/kg of DM and 8.2-8.2, in
11 refrigerated (R) and pre-cure frozen (PF), respectively. Initially, PF loin values of DM were higher
12 (2.91 g/kg of dry-cured loin) than R (2.71 g/kg of dry-cured loin). NaCl content of PF loin was
13 higher than R throughout the processing (1.15 and 1.38 g/kg of DM at day 50, respectively). The
14 total amino acid ((TFAA) concentration was higher in PF than in R, with the major differences at
15 day 50 (27.5 and 19.9 g/kg, respectively). The concentration of all free amino acids (FAA) was
16 affected by the freeze-thaw process. From day 30 onwards, the concentration of FAA increased in
17 PF to such an extent that after 50 days significantly higher values were observed for all FAA except
18 arginine, methionine and valine. There were no differences in consumer acceptance between R and
19 PF dry-cured loin.

20 **Highlights**

21 - Nitrogen fractions were not affected by frozen storage in dry-cured loin

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