

Surface treatment with NEBUNATURE to increase the shelf life of vacuum-packed Frankfurt-type sausages.

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1. JUSTIFICATION AND OBJECT OF THE STUDY

NEBUNATURE (DOMCA SAU) is a mixture of natural plant extracts with antimicrobial attributes for food preservation purposes. Nebunature is based on organosulfur compounds which are extracted from garlic and onion. It also contains rosemary and orange extracts.

The shelf life studies allow the evaluation of microorganism's capacity to grow and survive in foodstuffs under certain conditions. To do so, an analytical monitoring system is conducted during the time of preservation. The application of this kind of tests is recommended when a change in (its composition, production or preservation) foods which are already commercialized is planned. At the present study, the microbiological quality of vacuum-packed Frankfurt-type sausages was evaluated when NEBUNATURE was added as a surface treatment (dose 1:9).

2. METHODOLOGY

For the determination of aerobic mesophile we applied the method according to ISO 4833 (General directive for the count of microorganisms. Counting method of colonies at 30°C). This standard method is based on PCA – Plate Count Agar (Biokar Diagnostics) of a determined quantity of sample and its decimal dilutions obtained from the stock solution. Incubation was made at 30°C during 72 hours. The results are expressed as the number of colony forming units per gram of sample (cfu/g). Sampling was made during a period of 30 days at different times (0, 1, 5, 10 and 20 days). The samples were kept refrigerated at 4 ± 1 °C.

3. RESULTS

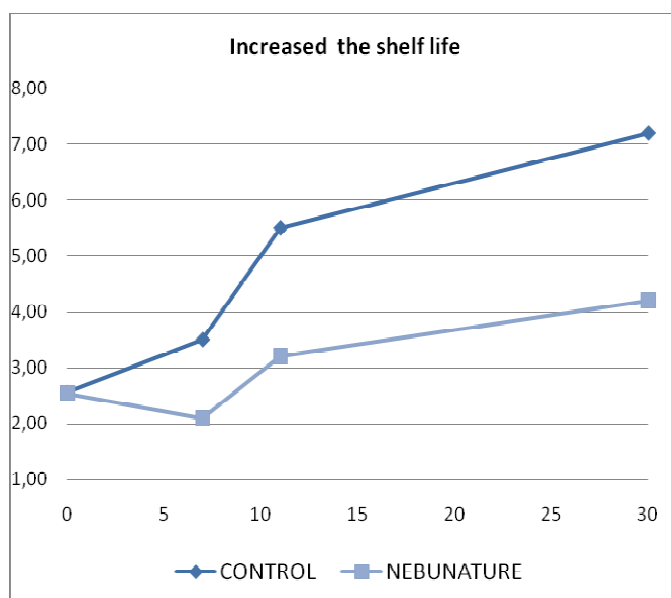


Figure 1. Evolution of aerobic mesophile microorganisms in vacuum-packed Frankfurt-type sausages