REDUCING MICROBIAL GROWTH AT SLICED MORTADELLA WITH ɣ-IRRADIATED BLACK PEPPER

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Mortadella (bologna-type) sausage represent quality meat product on the European market. During shelf-life deterioration changes occur. What was really important for this study, was evaluating the possibilities for reducing of microbial growth at sliced mortadella, with adding adding treated black pepper with gamma irradiation (9 kGry), stored at household conditions (100 g. sliced portions, packed in normal polyamide/polyethylene cases at 4±2˚C).

Microbial analysis of black pepper, showed significant differences of microbial population expressed as total cell count of bacteria (cfu/g), at irradiated samples microorganism weren't detected, compared to normal non treated black pepper were we obtained initial $1x10^5$ cfu/g.

Sampling analyses for sensory evaluation and microbiological determination, were four times during fifteen days at 0,5,10 and 15^{th} day of storage. Sensory evaluation results, showed that irradiation does not had unpleasant impact on aromatic components of black pepper and after 10 days of storage samples contain irradiated black pepper showed higher ($p<0,05$) results in appearance, hardness and juiciness. Obtained results of microbiological analyses showed that trend of significant lower amount of TVC at mortadella slices prepared with ɣ-irradiated black pepper, continued during storage.

Irradiation treatments of black pepper used in meat processing industry are alternative that need to be considered for decreasing microbial growth during household storage. In our study we obtained, reduce of microbial growth, which can be indicator for better sensory parameters, and it can also extending shelf life.