

Preliminary results of the complex analysis of Hungarian sausages enriched with probiotics

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Consumers have an increasing expectation towards the quality of food, which is far from satisfying microbiological safety and sensory quality. In defining food quality, the nutritional quality is becoming more important. Our aim was to improve the nutritional quality of pork sausage by the addition of probiotic microbial strain (*Lactobacillus acidophilus*) and to investigate the effect of added culture on the organoleptic quality. Four groups were created: the control did not contain added probiotics, while the lyophilized *L. acidophilus* strain was added to the treated groups at 10^6 , 10^7 and 10^8 CFU/g. The physical, chemical and microbiological properties of the samples were tested after filling, after smoking and after three weeks storage (in vacuum at 4 °C, or open air at 18 °C, 40 % RH). In the case of probiotic sausages, the initial CFU of Lactobacilli slightly decreased until the end of the storage, but this decrease was smaller than one order of magnitude. The amount of added probiotics did not have a significant effect in most factors measured, but after three weeks storage the pH was significantly lower in all groups. The four groups, having different cell count inoculations, did not separate when the near infrared spectra of all the samples (after filling, after smoking, after storage) were investigated in principal component analysis. However, if the assay was restricted only to samples before smoking, groups could be separated in a linear order according to the CFU levels, but this statement was not valid for the groups of samples following smoking.