Short Communication

VOLATILE COMPOUNDS OF RAW AND FLAVOURINGS-TREATED PORK MEAT DURING STORAGE

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Abstract

The effect of flavorings on volatile compounds produced in raw pork meat patties during storage, was investigated. Pork minced meat was mixed with a combination of herbs, spices and additives and stored at 4 °C for 10 days. Volatile compounds content of raw patties were analysed after 1, 3, 5 and 10 days storage by headspace solid-phase microextraction in combination with gas chromatography-mass spectrometry (HS-SPME/GC-MS). Treatment with flavorings resulted in lower hexanal levels in raw pork meat patties as compared to controls, throughout all storage period. Moreover, hexanal and isomers of 2,3 butanediol, markers of pork meat spoilage, had lower levels in treated samples. Hexanal values ranged from 122% to 133% on day1, from 192% to 154% on day3, from 80% to 13% on day5, in untreated and treated samples respectively, referred as percentage of the peak area of the internal standard. The ingredients Methyleugenol, Caryophyllene, Carvacrol and ar-Tumerone which had been identified among others in the spice mixture, were also detected in the spiced samples during storage. The results showed that treatment with certain spice mixture for flavoring, reduced the levels of spoilage volatile compounds and enriched the samples with beneficial ingredients, having biofunctional properties.

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