

## Discrimination of Storage Time for Pork Using Metal Oxide Semiconductor (MOS)-Type E-Nose

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An investigation was conducted to evaluate the capacity of an electronic metal oxide semiconductor (MOS)-type nose (e-nose) to classify pork samples with different storage times (0–6 d). The effects of the headspace-generation time and pork sample mass on the response of the e-nose were studied using multivariate analysis of variance and one-way analysis of variance, respectively. The results showed that the pork sample mass had the most significant effect on the e-nose sensor response, followed by the headspace-generation time. The optimum parameters were 10 g of sample mass with 5 min of headspace-generation time in a 500 mL vial. After either principal component analysis or linear discriminant analysis, the results showed that the e-nose with the optimum parameters can accurately classify the pork samples stored for 0–6 d. A method using a back propagation neural network was also performed, and 91.43% of the prediction set (with 92.86% of the training set) was classified correctly using this model.

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