

Title Effect of lactic acid pretreatment on the quality of fresh pork packed in modified atmosphere
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Citation Journal of Food Engineering Volume 72, Issue 3, February 2006, Pages 254-260
Keyword Fresh pork; Lactic acid; Modified atmosphere; Lipid oxidation

Abstract

Fresh pork ham portion collected from the local supermarket of Wuxi was sprayed with 1, 2, 4 and 6% lactic acid solution at an amount 2 ml per 100 gms, and packed in modified atmosphere of 45% O₂ and 20% CO₂. The samples analyzed during 4th, 8th and 12th days revealed that the color scores and *a** values decreased with increasing concentration of lactic acid and the days of storage. Lower concentration lactic acid treated samples such as 1 and 2%, did not make significant differences with the 0% lactic acid treated control which had color score of 6.9 and *a** value 7.83 on 12th day's analysis. Thiobarbituric acid reactive substances (TBARS) values of the samples increased with the increasing concentration of lactic acid and the days of storage. Lactic acid treated samples at 4 and 6% had higher TBARS values equal to 0.548 and 0.642 mg malonaldehyde/kg meat respectively on 12th day analysis. Four and six percent lactic acid treatments controlled microbial load more significantly among the treatments, which were found to be 5.17 and 5.04 log cfu/gm respectively on 12th day analysis. However, these samples could not keep their color and *a** values stable. In overall, 4 or 6% lactic acid spray treatment could be better if color and lipid oxidation could be stabilized by appropriate stabilizers.