



USE OF PERFORATION FOR MODIFIED ATMOSPHERE STORAGE OF ASPARAGUS

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Summary

Asparagus is a very perishable vegetable crop with high respiration rate. The objective of this work was to explore a new approach to generate modified atmosphere by the use of a perforation (Emond and Chau, 1990), according to the recommended atmosphere composition for the preservation of asparagus. The modified atmosphere package was designed based upon a mathematical model. The gas permeabilities of a 6 mm perforation was first evaluated as well as the respiration rate of the product. The weight to put inside the package was determined by the model.

The evolution of the relevant gas concentrations inside the package was measured. The modified atmosphere composition reached the stationary state after 5 days storage at 5°C. The concentrations of oxygen and carbon dioxide were different from the recommended and, therefore, they were not accurately predicted by the model. This may be due to the great variability of the samples and to physiological changes during storage. At the end of 14 days storage, the produce presented soft rot at the tips (47%) and white mold at all cut ends which means the storage period was too long.

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References

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