

Title Influence of Packaging Materials on Changing of CO₂: O₂ during the Storage of Fresh cut Red Cabbage

Author S. Glahan

Citation Book of Abstracts, Asia-Pacific Symposium on Assuring Quality and Safety of Agri-Foods, August 4-6, 2008, Radisson Hotel, Bangkok, Thailand.

Keywords Storage; packaging; polyethylene (PE); low density polyethylene (LDPE); polypropylene (PP); laminate; PVC Film

Abstract

Packaging materials and changing of CO₂: O₂ during the storage of fresh cut red cabbage was studied. The statistical model was completely randomized design comprised of 5 treatment bags as following; the polypropylene (PP), polyethylene (PE), low density polyethylene (LDPE), laminate and PVC Film with 4 replication and stored at 12 degree Celsius. The results showed that before storage, CO₂ content had a range of 0.90 – 62.37 percent while O₂ content had a value of 20.30 – 32.07 percent. Prior 24 hours during storage, CO₂ content in PVC film slightly increased but in PP PE and showed slightly decreased, The O₂ content of all treatment drama decreased according to storage time increased and showed significantly difference between treatment. The results indicated that CO₂ and O₂ content influenced by packaging materials and reflect to quality and storage life of fresh cut red cabbage. The highest TSS content of 6.21 brix received from fresh cut red cabbage those stored in PP bag while the most TA content got from those stored in LDPE bag at value of 0.07 percent and showed significantly difference. The fresh cut red cabbage stored in film PVC showed the most fresh weight lost of 10.15 percent while the least got from those stored in PP bag at the mean of 2.59 percent on 10 days storage and showed significantly difference. The fresh cut red cabbage in PP bag had the longest storage life of 18 days while the shortest storage life of 8 days got from those stored in laminate bag which significantly difference. Physical appearance of those fresh cut red cabbage in PP bag had better performance than those stored in other packaging and remained the good quality with 14 days in storage.