

Abstract

Study on Influence of Atmosphere Modified Controlled on Storage Life of Ginger this research divided into two experiments as followed.

Experiment I study on oxygen and carbon dioxide on life of ginger, the experimental design was 4x4 factorial in completely randomized design composed of 16 treatment combinations. The result showed that ginger increased in percent fresh weight loss according to storage time increased. Those ginger stored with CO₂:O₂ 0:0 PSI gave the highest fresh weight loss as 18.90 percent, physical appearance of all treatment slightly changed from the light yellow to deep yellow and browned. Firmness of fresh ginger decreased variously. TSS content in fresh ginger showed slightly decreased. Fresh ginger those stored in CO₂:O₂ 5:0 5:5 5:10 5:15 10:5 and 15:15 PSI gave the longest storage life of 60 days while those stored in CO₂:O₂ 0:10 PSI gave the shortest shelf life of 12 days

Experiment II study on packaging materials on shelf life of fresh ginger, the statistical model was completely randomized design composed of 5 treatments. The result showed that all fresh ginger those stored in various packaging materials increased in fresh weight loss according to storage time increased while those control (no packaging) gave the most fresh weight of 40.00 percent and the first runnerup was LDPE of 9.53 percent. Fresh ginger stored in MTEC bag gave the highest TSS content of 4.2 brix. Physical appearance of fresh ginger such as peel and pulp color slightly changes from light yellow to deep yellowish. Firmness of fresh ginger of all treatment slightly decreased according to storage time increased fresh ginger those stored in MTEC bag showed the highest firmness of 136.48 newton. Fresh ginger those stored in MTEC and PE bag gave the longest storage life of 60 days while stored in LDPE and PP gave the shortest storage life of 57 days