

Title Using moisture absorbers and modified atmosphere packaging of straw mushroom to improve quality, prolong shelf life and maintain antioxidant component

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Abstract

Effect of moisture absorbers using silica of 0, 3, 5 and 7 grams and modified atmosphere packaging by wrapping 150 grams of straw mushroom (*Volvariella volvacea* (Bull. ex Fr.) Sing.) packed in plastic box with or without 16-needlehole polyvinylchloride (PVC) and kept at 1 YC and 90±5% RH, on quality, shelf life and antioxidant component, were studied. It was found that straw mushrooms packed in non-perforated plastic films could only prolong the shelf life for 2 days. The mushroom had water soaking and structure collapse appeared. Straw mushrooms packed in 16-needle-hole PVC had the shelf life of 8 days. However, the results showed increases in electrolyte leakage, weight loss and total phenolic content and the decreases in visual quality, firmness, total soluble solid (TSS), titration acidity (T A), *Ferric Reducing Ability of Plasma* (FRAP) and vitamin C after the longer storage.