

Shelf life and characteristics of strawberry (*Fragaria nilgerensis* L.) coated by *Aloe vera*-glycerol and packed with perforated plastic film

H.R. Arifin, I.S. Setiasih, J.S. Hamdani

Acta Horticulturae 1011: 307-312. 2013.

Abstract

The use of *Aloe vera* gel added with glycerol (GLBG) coating, combined with perforated plastic film packaging may slow the damage of strawberry. The objective of this study was to obtain the appropriate concentration of glycerol in the GLBG coating combined with perforated plastic film packaging to gain strawberry that had long storage durability while having good characteristics. The experimental design used was randomized block design (RBD). The experiment consisted of 6 treatments namely coating with GLBG at the concentration of 0.5% (v/v), and without coating combined with perforated plastic film packaging (8, 16, 24 holes) repeated 3 times. The experiment was conducted at the Laboratory of Food Technology, Faculty of Agro Industrial Technology, Padjadjaran University, Bandung. The results of the first phase of the study indicated that the critical quality of strawberry was based on color with the value of $L^*=34.39$ (dull), $a^*=27.22$ (brownish dark red), and $b^*=18.55$ (brownish amber). The concentration of glycerol selected to be applied in the second phase was 0.5% (v/v). The second phase found that the GLBG coating at the concentration of 0.5% (v/v) combined with 24 hole perforated plastic film packaging gave the best result because it could preserve the shelf life of strawberry fruit up to 11 days storage. This treatment could reduce the strawberry weight loss, maintain color, hardness, moisture content, total soluble solid, total acid, and the most preferred by a sensory panel. In addition, this treatment could reduce vitamin C decrease, respiration rate, and total microbial count in the strawberry fruits.