

**Title** Effect of alginate coating combined with yeast antagonist on strawberry (*Fragaria × ananassa*) preservation quality

**Author** Yan Fan, Ying Xu, Dongfeng Wang, Li Zhang, Jipeng Sun, Liping Sun and Bin Zhang

**Citation** Postharvest Biology and Technology, Volume 53, Issues 1-2, July-August 2009, Pages 84-90

**Keywords** Strawberry; *Cryptococcus laurentii*; Bio-film; Edible coating; Alginate

#### **Abstract**

A novel edible bio-film was prepared and its effects on preserving strawberries were investigated. The film covering the fruit surface contained *Cryptococcus laurentii* ( $10^9$  cfu mL<sup>-1</sup>) in combination with alginate (2%, w/v), glycerol (2%, w/v), palmitic acid (0.5%, w/v), glycerol monostearate (0.5%, w/v), and  $\beta$ -cyclodextrin (0.5%, w/v). Microorganism viability of the bio-film underwent no obvious change during 20 d storage. Furthermore, the addition of *C. laurentii* as antagonist in the films aided inhibition of mold growth, and maintenance of strawberry commercial quality throughout storage. Sodium alginate film entrapped with *C. laurentii* had no significant effects on external color parameters and anthocyanins of strawberries during storage. In contrast, it significantly reduced microbial decay, decreased weight loss, maintained the firmness of the strawberries, and improved the quality and storage properties of the fruit.