

Title Ash gourd peel wax: Extraction, characterization, and application as an edible coat for fruits

Author K. M. Sreenivas, Kirtibala Chaudhari and S. S. Lele

Citation Food Science and Biotechnology, 20, Number 2, 383-387, 2011

Keywords ash gourd; peel wax; characterization; edible coating; waste utilization

Abstract

Ash gourd (*Benincasa hispida* Cogn) is a vegetable used in Asian countries and the peel contains high edible waxy materials. This paper reports extraction, characterization, and utilization of ash gourd peel wax as an edible coating in fruits; with strawberry (*Fragaria ananassa*) as a model system. Crude wax had melting point of 80°C and molecular weight by number (Mn) and molecular weight by weight (Mw) at 2,277 and 2,323 respectively. Dip method was used to coat crude wax as an emulsion on strawberry. Quantity of wax, concentration of sodium benzoate, and dip time were optimized and the values were 0.5%, 1M, and 3 min, respectively. Results were comparable with carnauba wax coating. Fruits without wax coating spoiled completely in less than 2 days at 25°C. Wax coating enhanced the shelf life to 7 days at 25°C and the properties such as texture, color, weight loss, titrable acidity, and microbial counts were well acceptable.

<http://www.springerlink.com/content/2248011w2866h315/fulltext.pdf>