

Title Development of coating for orange from shellac
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Abstract

Central composite design was used to determine the effects of shellac and carnauba wax on coating's properties. Contour plot from quadratic model was generated to determine the optimization. Results showed that both shellac and carnauba wax significantly affected binding, viscosity, gloss, and weight loss of Sainampueng orange ($p \leq 0.05$). Increasing shellac resulted in increased binding, viscosity and gloss, but decreased weight loss of Sainampueng compares to control. However, there were no significant ($p > 0.05$) difference of weight loss between treatment (9.03-9.76%). Treatment with shellac 9.27% and carnauba wax 1.3% showed the highest glossness and used for further study. Pilot scale testing on Sainampueng orang showed the similar results compared to previous study. Cost of coating only raw material is 112 baht per litre.