

**DEVELOPMENT OF BIOEDIBLE COAT TO
RETARD THE BROWNING AND
SOFTENING OF FRESH CUT FRUITS AND
VEGITABLES**

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by

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Abstract

Post harvest losses of tropical fruits are a serious problem because of rapid deterioration during handling, transportation and storage. To reduce the post harvest losses, there is a modern path way for the food technologists. Edible coating provide a barrier against external elements and therefore increase the shelf life by reducing gas exchange, loss of water, production of off flavors and off odors and solute migration towards the cuticle. Today minimally processes fruits catch the market better than fresh fruits. Minimal processing is the method of removing the natural barrier of the fruit. Due to removing of cuticle of fruit it become highly perishable. To increase the shelf life of fresh cut fruits it is suitable method which developing a bio edible coat. *Pedalium murex*, *Neolitsea cassia*, *Cycleapeltata* are annual herbs, which grows abundantly in Sri Lanka. The leaves of *Neolitsea cassia*, *Cycleapeltata* plants and whole plant have special gelling properties. Today fresh cut apple has high market than other fruits and deterioration of fresh cut apple is a main problem.

Each plant extracts were separated and prepared three types of coats. Fresh cut apple pieces were prepared using minimal processing techniques. Fresh cut apple were coated using three types of coats and also apple pieces were treated using ascorbic acid. As control apple were prepared without any treatments. Then weight loss, acidity, brix value, aerobic count were measured with the time. Apple pieces were packed and stored 29 days at $<10^{\circ}\text{C}$.

The results were analyzed and *Cycleapeltata* coated apple were significantly different with all other treatments. and also it was concluded that there was no ascorbic acid effect on the *Cycleapeltata* coat performance. Therefore final conclusion was the best bio edible coat for fresh cut apple is *Cycleapeltata* leave coat.

Key Words: Bio edible coat, *Cycleapeltata*, *Neolitsea cassia*, *Cycleapeltata*, Brix value, Acidity, Treatment, *Malus domestica*