

Effect of vacuum-aided enzyme infusion on the physicochemical characteristics of peeled musk lime fruits.

ABSTRACT

The use of enzyme in loosening fruit peel is one of the most intensively studied areas. However, current reports on the use of enzyme in peeling local citrus fruit such as musk lime (*Citrus mitis*) are limited. In this study, musk lime fruits were soaked in the pectinase enzyme solution and kept under vacuum for 15min before incubation to easy loosen the peel. Vacuum (pressure ranged from 0 to 700 mm Hg) was applied to hasten the penetration of enzyme solution into the peel. Results showed that vacuum pressure did not significantly affect the physicochemical properties (pH, total soluble solids, citric acid, ascorbic acid, moisture and sugar contents) of enzymatic-peeled musk lime. Except at high vacuum pressure (700 mm Hg), the 'L' value of puree colour and total pectin content of peel were significantly affected ($p < 0.05$). Naringin content in the peel was also affected at very high vacuum pressure. This study indicated that vacuum pressure was not significantly affected the physicochemical characteristics of the peeled musk lime. This indicated that vacuum pressure can be applied to aid the enzymatic peeling of musk lime fruits.

Keyword: Vacuum-aided; Enzyme infusion; Physicochemical characteristics; Musk lime; Fruit.