

**THE PHYSICAL AND CHEMICAL CHARACTERISTICS OF
THE BOUEA MACROPHYLLA (*BOUEA MACROPHYLLA
GRIFFITH*) CULTIVATED IN BINH MINH DISTRICT,
VINH LONG PROVINCE**

**Nguyen Minh Thuy, Nguyen Thi Huynh Nhu, Nguyen Thi Diem Suong,
Nguyen Kim Tien, Ngo Van Tai, Nguyen Thi Truc Ly**

Summary

The quality of two native commercial *Bouea macrophylla* species (sour and sweet) cultivated in Binh Minh district, Vinh Long province were evaluated at different harvesting stages as (1) mature-green stage, (2) half yellow and half green, (3) more yellow than green and (4) completely yellow. Fruit quality was evaluated with respect to physical properties (colour, respiration rate, firmness, diameter, weight), chemical composition (sugars, acid, mineral) and bioactive compounds (β -carotenes, vitamin C, total polyphenolic, flavonoid and tannin). The results for all the selected physiochemical parameters were found significant at different intervals. The development of fruit weight and size is evident at the time when the fruit is completely green to half yellow and half green fruit and grow slowly in the more yellow than green fruit, then reducing slightly until the fruit is completely yellow. High contents of ash, bioactive compounds were found in green fruits than the yellow fruits. The highest respiration rate of fruit was found for more yellow than green fruit (2/3 yellow). Being an acidic fruit, sour *Bouea macrophylla* contained higher concentration of citric acid as compared to sweet fruits (almost 2.2 times). The sweet fruits were found to be highly rich in total soluble solids (14.93 and 13°brix for sweet and sour fruit, respectively). Unripe and ripe fruits had higher content of vitamin C. The color chart of two commercial *Bouea macrophylla* varieties was established. Use of color charts and uniform lighting environments allows for normalization of the measurements of different observers.

Key words: Bouea macrophylla, bioactive compounds, chemical compound, color chart, physical properties.