Abstract

Morinda citrifolia has been used in traditional Polynesian medicine for over 2000 years to prevent and cure many different diseases. As a result of these uses and the market that is developing around nom juice, it has become increasingly important to confirm the plant's actual therapeutic properties. The objective of this study was to determine some functional, nutritional and microbiological changes during ripening period. The nom fruit was harvested unripe and stored in containers at room temperature for 3 days. Analyses of total mesophilic plate count, lactic arid bacteria, molds vitamin C, phenols content and latitudinal capacity were measured in unripe and ripe nom fruit. Results show that during the ripening period the pH lowered from 4, 6 to 4, 0 and the soluble solids are between 7,5 for unripe room and 47,3 for ripe noni. Microbiological analysis shown that during ripening period the molds and yeasts as well as the mesophilic bacteria they are maintained relatively constant in the order of $1x10^{1}$ and $4x10^{1}$ UFC/g respectively. Lactic acid bacteria increase in order of $2x10^{3}$. Phenols content in the nom fruit change of 41,4 to 57,1 mg GAE.$100g^{-1}$ after ripening period; vitamin C content decrease of 391 to 316 mg 100 g^{-1} while antioxidant activity (ORAC) oscillated between 7,4 and 8,0 μmol Trolox.g^{-1}. These results confirm that the unripe and ripe noni fruit has an important antioxidant capacity and the low pH can be due to lactic acid production.