

ABSTRACT

THE EFFECT OF GUM XANTHAN'S CONCENTRATION TO MANGOSTEEN JUICE CHARACTERISTIC (*Garcinia mangostana* L) DURING COLD STORAGE

By

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Mangosteen (*Garcinia Mangostana* L) is a tropical fruit commodity that has a very bright commercial prospect especially for export. One effort to increase its added value is to process mangosteen into juice. Some common problems faced in juice processing are on flavor, odor, color, suspension stability during storage. One alternative to overcome the problems is using a stabilizer. This research was aimed to find gum xanthan's concentration that results in the best characteristic of mangosteen juice during cold storage for 21 days.

The experiment was arranged factorially (4 X 4) in a Complete Randomized Design with 2 factors and 3 replications. The first factor was concentration of gum xanthan (K) consisted of 0% (K0), 0,03% (K1), 0,06% (K2) and 0,12% (K4). The second factor was storage time (T) consisted of 0 day (T0), 7 days (K2), 14 days (K3), and 21 days (K4). Homogeneity of the data was tested with Bartlett Test and aditivity was tested using Tuckey Test model. Then the data were further tested analyzed using LSD (Least Significant Different) test 1% and 5%.

The results showed that the addition of gum xanthan's concentration in mangosteen juice processing significantly affected total soluble solid and organoleptic properties of mangosteen juice but not for pH and color. The storage time did not significantly affect the organoleptic properties. The stability of mangosteen juice did not change until the last day of experiment (21 days). Gum xanthan's concentration of 0.12% was found as the best treatment of mangosteen juice with the score of flavor 3,83 (distinct mangosteen), score of color 3,70 (like), score of consistension 3,67 (thick), score of overall acceptance 3,85 (like), total soluble solid was 15,13°brix and pH value of 3,52.

Keywords : Mangosteen Juice , Xanthan Gum, Storage Time.