

## ABSTRACT

### THE EFFECT OF SUCROSE CONCENTRATION ON VITAMIN C LEVELS IN CANDIED MANGOES MANALAGI (*Mangifera indica L.*)

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Vitamin C is a vitamin that acts as an antioxidant and is effective in overcoming free radicals that damage cells or tissues. Vitamin C is easily soluble in water. The content of vitamin C in fruits and foods is easily damaged due to the oxidation process by outside air. The process of slicing, washing and boiling food ingredients that contain vitamin C can affect vitamin C levels in it. Therefore, storage is carried out at low temperatures (in the refrigerator) and cooking that does not cause discoloration in foods containing vitamin C. Vitamin C is easily found in vegetables and fruits. One fruit that contains vitamin C is mango.

The research design was carried out experimentally for 1 month periodically with random sampling techniques. Mango fruit samples that have not undergone processing and mango fruit samples that have been processed into wet sweets are taken juice and then examined whether there are differences in vitamin C levels with the UV-Vis spectrophotometry method. Each sample was replicated 3 times. Before analyzing the level of ascorbic acid in the sample, it is necessary to determine the maximum absorption wavelength at 200 - 400 nm.

Determination of levels in this study using the UV-Vis Spectrophotometry method was carried out at a maximum wavelength of 265,5 nm. showed that ascorbic acid levels in candied mango samples decreased after being stored for 24 hours. The greatest decrease in ascorbic acid levels occurred in confectionery samples with the addition of 25% sucrose, a percentage decrease of 32,5354%. While the smallest decrease in ascorbic acid levels occurred in samples with the addition of 15% sucrose, the percentage decrease was 2,8575%. However, when 30% and 35% sucrose were added, ascorbic acid decreased to 22,9547% and 20,5882%.

From the results of research that has been done, it can be concluded that the addition of sucrose concentration to vitamin C levels in candied mango manalagi (*Mangifera indica L.*) which is treated by being processed into wet sweets. The greatest decrease in vitamin C levels occurred in samples with the addition of 25% sucrose. While the smallest decrease in levels in the sample with the addition of sucrose 15%. The percentage of decrease in vitamin C levels in samples with the addition of 25% sucrose was 32,5354%, while the percentage of decrease in vitamin C levels with the addition of 15% sucrose was 2,8575%, 20% of 24,9661%, 30% of 22,9547%, and 35% of 20,5882%.

**Keywords :** *sweets mango manalagi, spectrophotometry UV-Vis, vitamin C, sucrose.*