

**STUDY OF OZONIZATION IN PRESERVING FRESHNESS
FRUIT *FRESH-CUT* MELON *Orange Meta SGH (Smart Green
House)* POLIJE**

Supervised by: Dr. Yossi Wibisono, S.TP., M.P.

Rika Ulfatihah

Food Engineering Technology Study
Program Department of Agricultural
Technology

ABSTRACT

Fruit *fresh-cut* Melon is a fruit product that has been minimally processed by cutting and is ready for direct consumption by consumers. Fruit *fresh-cut* This melon is easily damaged and the freshness of the fruit decreases if it is too long in the package. Alternative fruit handling *fresh-cut* Melon is using ozone technology because it can suppress microbial growth and is free from chemical residues. The purpose of this study was to determine the effect of the concentration of ozone solution on storage time and the physical and chemical quality characteristics of the fruit *fresh-cut* melon. This research method used a completely randomized design (CRD) with 2 factors, the first factor was a solution of 0.4 ppm, 0.8 ppm and 1.6 ppm ozone concentrations. The second factor is the length of storage time for 3 days and 5 days. The results of this study indicate that vitamin C levels are 8.43 – 11.60 mg/100g, pH is 5.19-4.83, total dissolved solids are an average of 5.10°Brix – 6,34°Brix, 10°C storage weight loss is 8.87% – 14.14% and 30°C storage weight loss is 15.23% – 22.30%. Concentration of ozone solution and shelf life of fresh-cut melon had an effect but not significantly different ($p > 0.01$) on vitamin C levels (mg/100g), pH, total dissolved solids (°Brix), and weight loss (%). A good concentration of ozone solution is found at 1.6 ppm and the length of time the fruit is stored *fresh-cut* The best melon is for 3 days.

Keywords: Melons, *Fresh-Cut* Fruit, Ozonation, Melon Fruit Freshness