# STORAGE BEHAVIOR OF GRAPE BERRIES TREATED WITH $GA_3$, BAGGED AND STORED AT DIFFERENT TEMPERATURES

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This thesis entitled, STORAGE BEHAVIOR OF GRAPE BERRIES TREATED WITH $GA_3$, BAGGED AND STORED AT DIFFERENT TEMPERATURES, prepared and submitted by MAYTINEE AKARAMAYTEEKUL in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE (Crop Science), is hereby accepted.

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## BIOGRAPHICAL SKETCH

The author was born on May 8, 1962 in Nakornrajasima Province, Thailand. She is the sixth of the nine children of Mr. Mongseng and Mrs. Gung Sengtang.

She obtained her primary and secondary education at her hometown (Kornburi School, 1978) and she completed her high school at Suranaree Wittaya School in 1980, the school located in Nakornrajasima province.

She studied in the College of Agriculture at Chiangmai University, major in Horticulture in 1980 where she graduated with the degree of Bachelor of Science in Agriculture in 1984.

After graduation, she was employed as an instructor at Nakornrajasima Agricultural College. In 1989, while working at the same office, she applied to pursue a master's degree in Crop Science, major in Horticulture and minor in Crop Protection at the Central Luzon State University, Muñoz, Nueva Ecija, Philippines.

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M. Akaramayteekul

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## ABSTRACT

AKARAMAYTEEKUL, MAYTINEE, Institute of Graduate Studies, Central Luzon State University, Muñoz, Nueva Ecija, Philippines, June, 1990. STORAGE BEHAVIOR OF GRAPE BERRIES TREATED WITH $GA_3$, BAGGED AND STORED AT DIFFERENT TEMPERATURES.

Adviser: Prof. Danilo T. Eligio

The study was conducted to determine the behavior of grapes treated with $GA_3$ applied at full-bloom at the concentration of 250 ppm. One kilogram of freshly harvested berries was placed in either polyethylene bag (8" x 12' x 0.08 mm) or newsprint and stored under ambient and air-conditioned room. The experiment was set-up following the Completely Randomized Design.

$GA_3$ application reduced the number of seeds and width of the individual berry resulting in reduced berry weight and cluster weight. Berry length and number of berries / cluster remained the same.

Daily weight loss was greater in $GA_3$ - treated berries, unbagged and stored at ambient condition. Lower weight loss was observed in controlled berries

placed inside the polyethylene bag and stored inside an air-conditioned room.

Total soluble solids remained the same in all treatments during the first four days of storage. On the fourth day onward, $GA_3$ treated berries and unbagged registered higher total soluble solid.

The pH of the berries was relatively low ranging from 3.47 to 3.98. Higher pH values were noted on $GA_3$-treated berries in polyethylene bag and stored in ambient condition.

Titratable acidity decreased with time. On the tenth day of storage, $GA_3$ treated berries had the lowest titratable acidity while bagged berries had higher titratable acidity than unbagged berries.

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