

**VCO PHYSICOCHEMICAL PROPERTIES OF VARIOUS COCONUT AGES:
BASIS FOR OPTIMIZATION OF RAW MATERIAL
INPUT OF VCO PRODUCTION**

A Special Problem

Presented to

The Faculty of the Department of Chemical Engineering

Central Philippine University

Jaro, Iloilo City, Philippines

In Partial Fulfillment of the

Requirements for the Degree of

Master of Engineering Major in Chemical Engineering

by

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May 2017

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ABSTRACT

This experimental study aimed to produce, measure and analyze the physicochemical properties of Ariana VCO using the Fresh Wet Method (Cold Process) in relation to coconut maturity using Association of Analytical Communities (AOAC) official methods done in triplicate. The optimum age of coconut was determined by analyzing the moisture content, moisture and volatile matter (MVM), peroxide value and fatty acid composition of coconut samples selected according to maturity. It was observed that moisture content, MVM and fatty acid composition exhibited Eta values of 0.450, 0.198 and 0.076, respectively. These values are positive; however, these are small effect sizes as stated by Cohen (1988). Therefore, there was no relationship between maturity of coconuts and moisture content, MVM and fatty acid composition. There was also no relationship between maturity of coconuts and its peroxide value because the peroxide value is zero in all trials for different coconut ages. ANOVA analyses at $p \leq 0.05$ revealed that no statistically significant difference was found among the three ages of coconuts on moisture content $F(2, 6) = .761, p = .507$, MVM $F(2, 6) = .122, p = .887$, and fatty acid composition, $F(2, 6) = .017, p = .983$. Consequently, the physicochemical properties of Ariana VCO do not vary for different coconut maturities. Therefore, there is no optimum age requirement for coconut to produce optimal values of physicochemical properties. From 9 months to 14 months, the physicochemical properties of VCO produced are the same.