ABSTRACT

Chilling-thawing had previously been reviewed as a method for the production of VCO. There were variations and inconsistencies in the variables of the chilling-thawing treatments applied between these previous studies, particularly in the inclusion of a preliminary centrifugation as a pre-treatment and the thawing methods used. The variables of the production determine the quality of the VCO, which is analyzed through the physicochemical properties of the oil, such as iodine value (IV) and free fatty acids content (%FFA). Additionally, the physicochemical properties of the coconut milk, such as %MC & pH, can determine its quality. This study was done with the purpose of evaluating the effect of various pre-treatments and thawing conditions on the aforementioned physicochemical properties of the VCO. The coconut milk was monitored for its pH value and %MC prior to treatment. Two different chilling-thawing treatments were applied: (a) T1, prepared with pre-treatment and thawed in incubator at 45°C, and (b) T2, prepared with pre-treatment and thawed in room temperature for 16 h. Significant differences were found in both the IV of T2 and Control sample, and %FFA of T1 sample to both Control and T2 sample. Nonetheless, the values for both parameters were all well within the range of the corresponding APCC standard, which suggests that chilling-thawing is a feasible method for the production of VCO that satisfies the requirements of the quality standard.

Keywords: *VCO, chilling, thawing, demulsification, physicochemical*