DETERMINATION OF THE ANTHOCYANIN CONTENT IN *Hibiscus sabdariffa* L. (ROSELLE) CALYCES FROM FRESH TO SPRAY-DRIED FORM

An Undergraduate Thesis presented to the

Department of Chemistry, College of Arts and Sciences,

University of the Philippines Visayas

Miagao, Iloilo

In Partial Fulfillment of the Requirements for the Degree of

Bachelor of Science in Chemistry

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JUNE 2015

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ABSTRACT

Hibiscus sabdariffa L. is an agricultural herb with calyces as the commercially important part this plant. The calyces is a good source of anthocyanin (pigments) with several potential applications in the food, pharmaceutical and cosmetic industries. These pigments are used worldwide in the production of drinks and as a source of natural food coloring. However, these pigments are very unstable due to processing and storage conditions. Thus, this present study investigated the amount of anthocyanin as it is processed into a commercial product in the form of spray-dried powder. The Roselle plant samples were obtained from Herbanext Laboratories farm. The fresh extract has 493.45 mg/L total monomeric anthocyanin. Compared to the fresh extract, concentrated aqueous spray-dried extract (261.06 mg/L) contains lower anthocyanin content, however, this is significantly higher than aqueous concentrate (124.41 mg/L). Both the aqueous extract and ethanolic extract contains the smallest amount of anthocyanin for each sets. Spray drying techniques increases the amount of anthocyanin which helps to prevent further degradation of the compound due to the influences of the storage environment and processing conditions.