ABSTRACT

Edison Sutiono  (03420110021)

THE UTILIZATION OF Aloe vera MUCILAGE AS CARRIER AGENT FOR THE ENCAPSULATION OF SOURSOP LEAVES TEA EXTRACT BY SPRAY DRYING
(xiv + 40 pages : 18 figures, 3 tables, and 13 appendices)

The leaves of soursop contain many phytochemical such as acetogenins, alkaloids, and flavonoids. Ethanolic extract of unfermented soursop leaves tea was known to contain antioxidant, anticancer, antidiabetics, anti-inflammatory, and prevent kidney damage. In this research, Aloe vera mucilage was utilized as the coating material for the encapsulation of soursop leaves tea extract. Effect of core to coating ratio (1:10 and 1:20) and ultrasonication time (15, 20, and 25 minutes) towards particle size, encapsulation efficiency, powder recovery, total phenolic content, and antioxidant activity of the microcapsules was observed. There were interactions between ultrasonication time and core to coating ratio toward total phenolic content, antioxidant activity, and encapsulation efficiency, with combination of “1:20, 25 minutes” resulted in best value. In conclusion, encapsulation of soursop leaves tea extract with Aloe vera mucilage was best achieved with the combination of 1:20 core to coating ratio and 25 minutes ultrasonication time.

Keywords: Aloe vera, Encapsulation, Soursop Leaves, Spray Drying, Ultrasonication

References: 47 (1996 - 2014)