ABSTRACT

Dewi Tri Cahyani (03420100079)

THE UTILIZATION OF PEPINO (Solanum muricatum Aiton) AS POWDERED BEVERAGE AND IT’S POTENCY AS ANTIOXIDANT
(xvi + 70 pages, 26 figures, 5 tables, 32 appendices)

Pepino (Solanum muricatum Aiton) is a subtropical plant that is originated from mount Andes in South America. Initially, pepino was brought to Indonesia during colonial era. Pepino has many health benefits due to it’s nutrients. Pepino acts as antioxidant that has the ability to scavenge free radical. Pepino contains compounds that act as antioxidant, such as phenolic, flavonoids, ascorbic acid, and carotenoid. Powdered beverage is preferred by most people because of it’s practicality. Spray drying is a method that is widely used to produce powdered beverage. The objectives of this research was to investigate the potency of antioxidant of pepino, through the making of powder pepino beverage. Based on the pepino powder’s physicochemical characteristics, it was determined that 15% maltodextrin concentration produced pepino powder with less moisture content, higher yield, higher solubility, less hygroscopicity, and less $a_w$. Based on the stability and sensory evaluation, it was determined that the chosen formulation of pepino beverage consists of 5% pepino powder and 10% sugar. The chosen beverage was being analyzed in total phenolic content, total flavonoid content, ascorbic acid, and antioxidant capacity. The results shown that pepino beverage contains total phenolic content 0.03±0.00 mg GAE/g, total flavonoid content 0.02±0.00 mg QE/g, ascorbic acid 1.83±0.16 mg/100 g, beta carotene 0.24±0.03 mg/L, and antioxidant capacity 1.61±0.03 mg VCE/100 g. According to the antioxidant result, the pepino beverage has low antioxidant potency.

Keywords: pepino, antioxidant, powdered beverage, spray drying, phenolic, flavonoids, ascorbic acid, beta carotene.

References : 68 (1995-2014)