

ABSTRACT

Begonia (Begonia cane) is a plant that contains anthocyanins that produce a red color. Begonia has potential as a natural food coloring because of its color concentrated and safety for consumption. Beside, being a natural dye, anthocyanins also have potential as antioxidants and anti-cancer agents. This study aims to determine the stability of begonia anthocyanin microcapsules against pH treatment, sugar content, heating temperature, and heating time. The method used in this research is the experimental method. The data was obtained based on the average absorbance value obtained from reading the UV-VIS spectrophotometer and presented in the form of tables and graphs. The concentrations used in the stability test were pH 2, 3, 4, 5, 6, 7, 8, 9; sugar content 30%, 40%, 50%; heating temperature 70°C, 80°C, 90°C, 100°C; and heating time of 30 minutes, 60 minutes and 90 minutes. The results of the study, Show that the stability test of the anthocyanin pigment begonia microcapsules is stable at pH 2 and 3, sugar content up to 50%, heating temperature 70°C, 80°C, 90°C, 100°C for 15 minutes, and unstable to heating time 30 minutes to 90 minutes.

Keywords: Anthocyanin, Begonia, Microcapsules, Stability test, Natural dyes

ABSTRAK

Tanaman begonia (*Begonia cane*) merupakan tanaman yang mengandung antosianin yang menghasilkan warna merah. Begonia memiliki potensi sebagai pewarna makanan alami karena warnanya yang pekat dan aman dikonsumsi. Antosianin pada begonia juga memiliki potensi sebagai antioksidan dan anti kanker. Penelitian ini bertujuan untuk mengetahui stabilitas mikrokapsul antosianin begonia terhadap perlakuan pH, kadar gula, suhu pemanasan, dan lama pemanasan. Metode yang digunakan dalam penelitian ini yakni metode eksperimen, data diperoleh berdasarkan nilai rata-rata absorbansi yang didapat dari pembacaan spektrofotometer UV-VIS dan disajikan dalam bentuk tabel dan grafik. Konsentrasi yang digunakan dalam uji stabilitas adalah pH 2, 3, 4, 5, 6, 7, 8, 9; kadar gula 10%, 20%, 30%, 40%, 50%; suhu pemanasan 70°C, 80°C, 90°C, 100°C; dan lama pemanasan 30 menit, 60 menit dan 90 menit. Berdasarkan hasil penelitian dapat disimpulkan bahwa uji stabilitas mikrokapsul pigmen antosianin begonia stabil terhadap pH 2 dan 3, kadar gula 30%, 40%, 50%, suhu pemanasan 70°C, 80°C, 90°C, 100°C selama 15 menit, dan tidak stabil terhadap lama pemanasan 30 menit hingga 90 menit.

Kata kunci: Antosianin, Begonia, Mikrokapsul, Uji stabilitas, Pewarna alami