

ABSTRAK

Tanaman mata ikan (*Lemna minor* L.) merupakan tanaman akuatik yang memiliki kandungan protein relatif tinggi sehingga berpotensi dimanfaatkan sebagai sumber protein nabati. Penelitian ini bertujuan untuk mengetahui pengaruh variasi suhu pengeringan terhadap kadar protein total simplisia tanaman mata ikan menggunakan metode Bradford. Simplisia dikeringkan menggunakan oven pada suhu 40°C, 50°C, dan 60°C, kemudian dihaluskan menjadi serbuk. Sebanyak 1 g serbuk simplisia diekstraksi dengan cara dilarutkan dengan 20 mL *phosphate buffer saline* (PBS) pH 7,4, disentrifugasi pada 6000 rpm selama 10 menit pada suhu 4°C, kemudian ditetapkan kadar proteinnya menggunakan metode Bradford dengan reagen *Coomassie Brilliant Blue G-250*. Pengukuran absorbansi dilakukan menggunakan spektrofotometer UV-Vis pada panjang gelombang serapan maksimum 596 nm dengan *operating time* 5 menit. Data dianalisis menggunakan uji Saphiro-Wilk, uji Levene, dan One-Way ANOVA pada taraf kepercayaan 95%. Hasil penelitian menunjukkan bahwa kadar protein total rata-rata pada suhu pengeringan 40°C, 50°C, dan 60°C berturut-turut sebesar 13,96 mg/g, 15,61 mg/g, dan 13,72 mg/g. Suhu pengeringan 50°C menghasilkan kadar protein tertinggi. Hasil uji One-Way ANOVA menunjukkan tidak terdapat perbedaan yang signifikan antar perlakuan suhu pengeringan ($p = 0,250$). Dengan demikian, variasi suhu pengeringan 40-60 °C tidak memberikan pengaruh yang signifikan terhadap kadar protein total simplisia tanaman mata ikan berdasarkan metode Bradford.

Kata Kunci: Mata ikan (*Lemna minor* L.), protein, Bradford, suhu pengeringan

ABSTRACT

Lemna minor L. is an aquatic plant with a relatively high protein content, making it a potential source of plant-based protein. This study aimed to evaluate the effect of different drying temperatures on the total protein content of *Lemna minor* powder using the Bradford method. The samples were oven-dried at 40°C, 50°C, and 60°C, then ground into powder. One gram of powder was extracted with 20 mL of phosphate buffer saline (PBS, pH 7.4), centrifuged at 6000 rpm for 10 minutes at 4°C, and the resulting supernatant was analyzed using Bradford reagent containing Coomassie Brilliant Blue G-250. Absorbance was measured using a UV-Vis spectrophotometer at the maximum wavelength of 596 nm with an operating time of 5 minutes. Data were analyzed using the Saphiro-Wilk test, Levene's test, and One-Way ANOVA at a 95% confidence level. The average of total protein contents at drying temperatures of 40°C, 50°C, and 60°C were 13.96 mg/g, 15.61 mg/g, and 13.72 mg/g, respectively. The highest protein content was obtained at 50°C. However, the One-Way ANOVA indicated that the differences among drying temperatures were not statistically significant ($p = 0.250$). Therefore, drying temperatures ranging from 40°C to 60°C did not significantly affect the total protein content of *Lemna minor* powder as determined by the Bradford method.

Keywords: duckweed (*Lemna minor* L.), protein, Bradford, drying temperature