STABILITY TEST OF BIOACTIVE COMPONENTS AND ANTIOXIDANT ACTIVITY OF PEDADA LEAVES EXTRACT (*Sonneratia caseolaris*)

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ABSTRACT

Pedada leaves are rich in bioactive compounds like terpenoids, tannins, saponins, phenols, steroids, and flavonoids which can be utilized in food products as functional foods and antioxidant food additives. The production of food products involves of raw materials into food products often involves the use of high temperatures at varying times, so it is necessary to test the stability of bioactive components and antioxidant activity of pedada leaf extract at various temperatures and heating times. This study examined five temperature variations (2, 30, 50, 70, and 90 ^{0}C) with the heating duration of 0, 10, 20, 30, 40, 50, 60, and 90 minutes. The data obtained in this study were analyzed descriptively and statistically (ANOVA) at the 5% level. Based on the results

of the study, it is known that the temperature treatment of 2, 30, 50, and 70 ^{0}C, while the heating time of 0, 10, 20, 30, 50, 60, and 90 minutes, the total phenol content, flavonoids, and antioxidant activity are still in a stable state. The 90 ^{0}C temperature treatment caused an increase in the content of total phenols and total flavonoids, but the antioxidant activity decreased. In summary, the stability of bioactive components and antioxidant activity of pedada leaf extract had no effect at temperatures of 2, 30, 50, and 70 ^{0}C. However, the temperature of 90 ^{0}C affects the stability and antioxidant activity of pedada leaf extract.

Keywords: antioxidant activity, bioactive components, pedada leaf extract, total flavonoids