

ABSTRACT

**ANTIOXIDANT ACTIVITIES OF EXTRACT *n*-HEXANA, ETHYL
ASETAT, AND METANOL *Caulerpa racemosa* FROM KANGEAN
ISLAND AND MANDANGIN ISLAND EAST JAVA**

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In the study the antioxidant activities of *n*-hexane, ethyl acetate, and methanol extracts of *Caulerpa racemosa* were tested by using DPPH method performed on spectrophotometer. The absorbance was measured at wavelength 517 nm. Vitamin C was used as positive control. The results showed that *n*-hexane extract of *C.racemosa* from Mandangin Island gave a strong antioxidant activity at IC₅₀ of $94,94 \pm 24,33$ $\mu\text{g/mL}$, while the other 5 extract only showed weak to moderate activities at IC₅₀ of 137-1441 $\mu\text{g/mL}$.

The phytochemical screening was also conducted for all extracts by using TLC methods. The mobile phase used was *n*-hexane : ethyl acetate (1:1) and was visualised with anisaldehyde-H₂SO₄ for terpenoid, FeCl₃ for polyphenol, ammonia for flavonoid and Dragendorff for alkaloid. The results indicated that all *C.racemosa* extracts contain terpenoid and polyphenol. In addition there are flavonoid in the *n*-hexane extract from Kangean Island and Mandangin Island, while alkaloid are found in all three extracts from Mandangin Island.

Keywords: antioxidant, extract, *Caulerpa racemosa*, algae, DPPH, Kangean Island, Mandangin Island