PERBANDINGAN AKTIVITAS ANTIOKSIDAN DAN KADAR FLAVONOID TOTAL PADA BONGGOL SERTA DAUN BROKOLI (*Brassica oleracea* L. cv. groups Broccoli)

ABSTRAK

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Antioksidan merupakan senyawa yang mampu menghambat reaksi radikal bebas dalam tubuh. Penelitian ini bertujuan untuk menentukan aktifitas antioksidan, menentukan kandungan flavonoid total, dan menentukan hubungan antara aktivitas antioksidan dengan kadar flavonoid total dari ekstrak etanol bonggol serta daun brokoli (*Brassica oleracea* L. cv. groups Broccoli). Dalam penelitian ini bonggol serta daun brokoli dikeringkan menggunakan pengeringan beku, selanjutnya dilakukan proses maserasi. Hasil penelitian menunjukkan bahwa aktivitas antioksidan daun brokoli lebih baik dibandingkan dengan bonggol brokoli. Aktivitas inhibisi dari ekstrak daun terhadap DPPH sebesar 9,31% dengan nilai IC_{50} 474,08 µg/ml, sedangkan aktivitas inhibisi dari ekstrak bonggol terhadap DPPH sebesar 13,32% dengan nilai IC_{50} 559,20 µg/ml. Kadar flavonoid pada daun yaitu 1,716% lebih besar dibandingkan pada bonggol yaitu 1,073%. Hasil uji korelasi person menunjukkan adanya hubungan bermakna antara aktivitas antioksidan dengan kadar flavonoid total dari ekstrak etanol bonggol serta daun brokoli.

Kata Kunci : Bonggol serta daun brokoli (*Brassica oleracea* L. cv. groups Broccoli), pengeringan beku, DPPH, Antioksidan.

The comparison of antioxidant activity and total flavonoid content of broccoli (*Brassica oleracea* L. cv. groups Broccoli) rods and leaves

ABSTRACT

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Antioxidants are compounds having an ability to inhibit free radical reaction in human body.This research aimed to determine antioxidant activity, flavonoid content, and correlation between antioxidant activity and flavonoid content from ethanol extract of broccoli (*Brassica oleracea* L. cv. groups Broccoli) rods and leaves. In this study broccoli rods and leaves were dried using *freeze dryer*, and carried out the process of maceration. The results showed that antioxidant activity of broccoli's leaves was better than rods. Inhibition activity of leaves extracts against DPPH was 9,31%, with IC_{50} value 474.08 µg/ml, while inhibition activity of rods extracts against DPPH was 13,32%, with IC_{50} value 559.20 µg/ml. Flavonoids content of broccoli leaves (1.716%), larger than in broccoli rods (1.073%). The results of pearson correlation showed a significant correlation between antioxidant activity and total flavonoids content of ethanol extract of rods and leaves of broccoli.

Keywords : Rod and leaves of broccoli (*Brassica oleracea* L. cv. Groups Broccoli), *freeze dryer*, DPPH, Antioxidants.