

## ABSTRACT

### ANTIOXIDANT ACTIVITY TEST OF ETHANOL EXTRACT BLACK BETEL (*Piper betle* L. var *nigra*) USING DPPH

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Black betel leaf (*Piper betle* L. var *nigra*) is an Indonesian plant from the *piperaceae* family. Black betel leaves in this study were obtained from UPT Laboratorium Herbal Materia Medika Batu Regency in the form of dried leaves, then mashed using a blender and sieved using a sieve. The extraction method in this research uses the maceration method which is then remacerated twice. The filtrate obtained from the maceration results was concentrated using a rotary vacuum evaporator and obtained a thick extract. This study was conducted to determine the antioxidant activity contained in thick ethanol extract of black betel leaves with the DPPH method thick method using UV-Vis spectrophotometry with 3 replications, and obtained the average IC<sub>50</sub> value of 96%, ethanol thick extract of black betel leaves, which is  $122,6832 \pm 1,1276$  ppm with a coefficient of variation of 0,9191%. The average IC<sub>50</sub> value of ascorbic acid is  $10,3070 \pm 0,2650$  ppm with a coefficient of variation of 2,5710%. From the results of the average IC<sub>50</sub> value of 96% ethanol condensed extract of black betel leaves is 122,6832 ppm, which contains moderate antioxidants because it falls into the range of 100-150, while the average IC<sub>50</sub> value of ascorbic acid is 10,3070 ppm, which contains very strong antioxidants because it falls into the range  $\leq 50$ . This shows that the antioxidant activity in 96% ethanol extract of black betel is lower than vitamin C because the smaller the IC<sub>50</sub> value, the greater the antioxidant activity.

**Keyword** : Black betel leaf, IC<sub>50</sub>, Spectrophotometry, Antioxidant, Ascorbic acid.