

INTISARI

Radikal bebas merupakan senyawa yang bersifat reaktif akibat adanya elektron bebas pada strukturnya. Kecenderungan radikal bebas untuk menstabilkan diri dapat mengoksidasi komponen sel seperti lipid, protein dan DNA sehingga menginisiasi timbulnya berbagai penyakit. Pengaruh radikal bebas dapat dikurangi oleh antioksidan, dengan cara menetralkan kereaktifan radikal bebas. Beberapa antioksidan sintetis seperti *butyl hydroxy anisol* (BHA), propil galat (PG) dan *ter-butyl hydroquinone* (tBHQ) dapat memicu kanker sehingga sumber antioksidan alam dianggap lebih aman digunakan.

Menurut beberapa penelitian, buah Buni [*Antidesma bunius* L. (Spreng)] diklaim mengandung senyawa fenolik yang berefek antioksidan seperti kaemferol, kuersetin, mirisetin, asam fenolik, dan antosianin. Jumlah senyawa fenolik seringkali dikaitkan dengan aktivitas antioksidan yang dimiliki, oleh karena itu tujuan dari penelitian ini adalah menetapkan kandungan fenolik total dan mengukur aktivitas antioksidan fraksi etil asetat ekstrak etanol buah Buni menggunakan metode Folin-Ciocalteu dan metode DPPH. Etil asetat dipilih untuk melarutkan flavonoid yang sifatnya kurang polar seperti kuersetin.

Hasil penelitian menunjukkan kandungan fenolik total sebesar $11,1462 \pm 0,1595$ mg ekuivalen asam galat per gram fraksi sedangkan aktivitas antioksidan (IC_{50}) fraksi etil asetat ekstrak etanol buah buni sebesar $355,5011 \pm 16,4092$ $\mu\text{g/mL}$.

Kata kunci : Buni, fraksi etil asetat, antioksidan, senyawa fenolik, IC_{50}

ABSTRACT

Free radical is a very reactive compound as a result of an unpaired electron in its structure. The tendency of free radicals to stabilize their structure can cause oxidation of cell components such as lipid, protein and DNA which lead to various diseases. These effects could be avoided with antioxidant by reducing free radical reactivity. Some of the synthetic antioxidant such as butyl hydroxy anisol (BHA), propyl gallic (PG) dan ter-butyl hydroquinone (tBHQ) could initiate cancer so that natural sources of antioxidant are considered safer to be used.

According to some studies, [*Antidesma bunius* L. (Spreng)] fruits called Buni was claimed to have phenolic compounds that have antioxidant activity such as kaempferol, quercetin, miricetin, fenolic acids, and anthocyanin. Total phenolic content (TPC) frequently associated with antioxidant activity, therefore the aim of this study is to establish TPC using Folin-Ciocalteu method and to determine antioxidant activity of ethyl acetate fraction from Buni fruit using DPPH assay. Ethyl acetate was used to dissolve the less polar flavonoid such as quercetin.

The result showed that antioxidant activity (IC_{50}) of ethyl acetate fraction from Buni fruit was $355.5011 \pm 16.4092 \mu\text{g} / \text{mL}$ while its total phenolic content was $11.1462 \pm 0.1595 \text{ mg GAE} / \text{gram fraction}$.

Key words : Buni, ethyl acetate fraction, antioxidant, phenolic compound, IC_{50}