

INTISARI

Telah dilakukan penelitian tentang pengaruh cahaya terhadap kandungan flavonoid daun *Graptophyllum pictum* (L.) Griff. hasil budidaya terkendali. Penelitian ini bertujuan untuk mengetahui pengaruh cahaya terhadap kandungan flavonoid daun ungu yang dibudidayakan secara terkendali dengan pemberian naungan dan perbedaan musim panen.

Penelitian dilakukan dengan menggunakan rancangan sederhana pola dua arah. Sebanyak 40 tanaman *Graptophyllum pictum* di suatu lahan percobaan BPTO Tawangmangu dibagi menjadi dua petak. Petak pertama diberi naungan anyaman daun kelapa, sedangkan petak kedua dibiarkan terbuka. Pemeliharaan tanaman kedua petak sama, kemudian dipanen pada musim hujan dan musim kemarau, sehingga terdapat empat modifikasi perlakuan, yaitu A = dengan naungan dan dipanen pada musim kemarau, B = tanpa naungan dipanen musim hujan, C = dengan naungan dipanen musim hujan dan D = tanpa naungan dipanen musim kemarau. Pemanenan dilakukan dengan cara memetik helaian daun yang telah tua (tiga helai dari ujung bawah tangkai), dilakukan penanganan pascapanen, dibuat serbuk dan diekstraksi serta ditetapkan kadar flavonoidnya secara Kromatografi Cair kinerja Tinggi (KCKT) menggunakan pembanding senyawa flavonoid yang diisolasi dari tanaman daun ungu tersebut.

Isolasi flavonoid dilakukan dengan cara kromatografi kertas preparatif, diidentifikasi dengan kromatografi lapis tipis (KLT) dua arah menggunakan fase diam selulosa dan fase gerak campuran antara butanol-asam asetat-air (BAW) = 3:1:1 serta asam asetat 15%. Sebagai penampak bercak uap ammonia, UV 254 dan 366 nm serta pereaksi sitroborat. Selanjutnya dilakukan pengukuran spektrum menggunakan Spektrofotometer UV-Vis dengan penambahan pereaksi diagnostik. Isolat flavonoid parsial daun ungu tersebut teridentifikasi sebagai senyawa flavon dengan kemungkinan gugus OH pada C-4', C-5 dan C-7. Adapun untuk penetapan kadar flavonoid, dilakukan secara KCKT.

Hasil penetapan kadar flavonoid, sampel A = $6,49 \pm 0,004\%$, B = $6,87 \pm 0,028\%$, C = $4,41 \pm 0,009\%$ dan D = $17,75 \pm 0,035\%$. Setelah dianalisis dengan Anava ($p < 0,05$) kandungan flavonoid daun ungu hasil budidaya terkendali menunjukkan perbedaan yang nyata antara kedua perlakuan. Kandungan flavonoid tertinggi pada tanaman yang tanpa naungan dan dipanen pada musim kemarau, sedang yang terendah pada tanaman yang diberi naungan dan dipanen musim hujan.

Dengan demikian dapat disimpulkan bahwa naungan dan musim panen daun ungu berpengaruh terhadap kandungan flavonoidnya.

Kata kunci : budidaya, *Graptophyllum pictum* (L.)Griff., naungan, musim panen, flavonoid

ABSTRACT

The research about the effect of light on cultivated *Graptophyllum pictum* (L.) Griff flavonoid contents has been carried out by giving a cover to the plants and the difference of harvesting time. Two ways simple design was used on the experimental where 40 plants were cultivated on two plots in BPTO Tawangmangu fields. The first plot was covered by the coconut leaves plait and the second one was kept open. The same maintenance was given to both plots, then the yields were harvested on the dry and rainy season by picking the mature leaves. There were 4 treatment modifications in harvesting, those are A = plants with cover, harvested on dry season, B = plants with no cover, harvested on rainy season, C = plants with cover, harvested on rainy season and D = plants with no cover, harvested on dry season. Then continued by post harvest treatment, extraction process and flavonoid content assesment by High Performance Liquid Chromatography (HPLC) with flavonoid standard compound that isolated from the same plants.

Graptophyllum pictum flavonoid was isolated by paper chromatography, identified by two ways Thin Layer Chromatography (TLC) with cellulose (stationary phase), the eluent were acetic acid 15% and *n*-butanol-acetic acid-water /BAW (3:1:1). Ammonia gas, UV-light (254 and 366 nm) and citroborat reagents were used to show the spots. The measurement by UV-Vis Spectrophotometer with diagnostic reagents. Pure flavonoid of *Graptophyllum pictum* identified as the flavon compound with OH on C-4', C-5 and C-7.

The result showed that flavonoid content on sample A = $6.49 \pm 0.004\%$; B = $6.87 \pm 0.028\%$; C = $4.41 \pm 0.009\%$ and D = $17.75 \pm 0.035\%$. Statistical analysis by ANAVA ($p < 0.05$) showed that flavonoid content on cultivated *Graptophyllum pictum* has significance difference between both treatment. The highest flavonoid content was got from plants without cover and harvested on dry season, while the lowest one was got from plants with cover and harvested on rainy season. It can be concluded that light significantly influenced the flavonoid content on *Graptophyllum pictum*

Key word : cultivation, *Graptophyllum pictum* (L.) Griff., cover, harvested, flavonoid