RINGKASAN

Tapak dara (*Catharanthus roseus* L.) merupakan tanaman obat dari famili Apocynaceae yang sering digunakan untuk mengobati berbagai penyakit. Keragaman karakter anatomi dapat digunakan sebagai salah satu parameter untuk seleksi dalam program pemuliaan tanaman. Selain itu kandungan klorofil juga berpengaruh pada proses fotosintesis yang dapat digunakan untuk menentukan varietas unggul pada tanaman. Penelitian ini bertujuan untuk 1) mengetahui karakter anatomi dan kandungan klorofil daun pada beberapa varietas *C. roseus,* 2) mengetahui perbedaan karakter anatomi dan kandungan klorofil pada beberapa varietas *C. roseus*. Penelitian dilakukan secara *purpossive sampling* masing-masing varietas dengan 3 ulangan tanaman. Sampel daun *C. roseus* diambil dari koleksi proyek Riset Peningkatan Kompetensi (RPK) di *green house* Fakutas Biologi Unsoed. Pembuatan preparat anatomi daun menggunakan metode parafin yang dimodifikasi, dengan pewarna safranin 1% dalam alkohol 70%. Data dianalisis menggunakan uji ANOVA dengan tingkat kesalahan 1% dan 5%, kemudian dilanjutkan dengan uji BNT. Hasil penelitian menunjukkan bahwa karakter anatomi pada enam varietas *C. roseus* memiliki nilai rata-rata tebal kutikula adaxial dan abaxial sebesar 3,47 µm dan 2,5 µm. Rata-rata tebal epidermis adaxial dan abaxial sebesar 15,69 µm dan 9,58 µm. Rata-rata tebal mesofil sebesar 150,42 µm. Rata-rata rasio palisade sebesar 1,01, Rata-rata panjang stomata adaxial dan abaxial sebesar 21,67 µm dan 20,83 µm, lebar stomata adaxial dan abaxial 17,78 µm dan 11,39 µm, Rata-rata kerapatan stomata adaxial dan abaxial sebesar 5,94 mm^2 dan 10,89 mm^2. Rata-rata kerapatan trikomata adaxial dan abaxial sebesar 0,94 mm^2. Rata-rata kandungan klorofil pada klorofil a, klorofil b, dan klororfil total sebesar 6,18 mgl^{-1}, 3,0 mgl^{-1}, dan 0,94 mgl^{-1}. Perbedaan karakter anatomi pada enam varietas *C. roseus*, terdapat pada tebal mesofil, panjang stomata abaxial, lebar stomata abaxial, dan kerapatan stomata abaxial dengan $p<0,05$. Kandungan klorofil a pada enam varietas *C. roseus* berbeda nyata dengan nilai $p<0,05$.

Kata kunci: *Catharanthus roseus, kandungan klorofil, karakter anatomi*

SUMMARY

Tapak dara (*Catharanthus roseus* L.) is a medicinal plant from the Apocynaceae family which is often used to treat various diseases. The diversity of anatomical characters can be used as a parameter for selection in plant breeding programs. In addition, chlorophyll content also affects photosynthetic reactions which can be used to determine superior varieties in plants. This study aimed to 1) determine the anatomical characters and chlorophyll content of the leaves in several varieties of *C. roseus*, 2) to determine the differences in anatomical characters and chlorophyll content of several varieties of *C. roseus*. The study was conducted by purposive sampling for each variety with 3 replications of plants. *C. roseus* leaf samples were taken from the Competency Improvement Research (CIR) project collection at the green house of the Faculty of Biology, Unsoed. Leaf anatomical preparations were made using a modified paraffin method, with 1% safranin dye in 70% alcohol. Data were analyzed to use ANOVA test with an error rate of 1% and 5%, then continued with the BNT test. The results showed that the anatomical characters of the six varieties of *C. roseus* had an average thickness of the cuticle adaxial and abaxial thickness of 3.47 µm and 2.5 µm. The average thickness of the adaxial and abaxial epidermis was 15.69 µm and 9.58 µm. The average thickness of the mesophyll was 150.42 µm. The average palisade ratio was 1.01, the average length of the adaxial and abaxial stomata was 21.67 µm and 20.83 µm, the width of the adaxial and abaxial stomata was 17.78 µm and 11.39 µm, the average density of the adaxial stomata and abaxial was 5,94 mm^2 and 10,89 mm^2. The average adaxial and abaxial trichomata density was 0.94 mm^2. The average chlorophyll content of chlorophyll a, chlorophyll b, and total chlororphyl was 6.18 mgl^{-1}, 3.0 mgl^{-1}, and 0.94 mgl^{-1}. The differences in anatomical characters in the six varieties of *C. roseus* were found in the thickness of the mesophyll, length of the abaxial stomata, width of the abaxial stomata, and density of the abaxial stomata with value $p<0.05$. The chlorophyll a content of the six varieties of *C. roseus* was significantly different with a value $p<0.05$.

Key words: *Anatomical characters, Catharanthus roseus, chlorophyll content*