

SUMMARY

Red gendola (*Basella rubra* L.) and white gendola (*Basella alba* L.) are species of the *Basella* genus that grow abundantly in Indonesia. Both plants have similar morphological characteristics and contain flavonoids, which can be used in the medical and pharmaceutical fields. This study aims to knowing morphological characters comparison and determine the highest total flavonoid content between red gendola and white gendola. The research was conducted with survey method. The independent variable was the *Basella* plant, the dependent variables were the morphological characters and total flavonoid contents. The parameters consist of several morphological characters such as root (root system and root color), stem (stem shape, stem type, stem surface, growth type, growth direction, and stem color), leaf (leaf type, leaf arrangement, leaf blade, leaf base, leaf margin, leaf tip, leaf surface, venation, and leaf color), flower (flower attachment, flower type, flower shape, flower sex, and flower color), fruit (fruit type, fruit category, fruit shape, and fruit color), and seed (seed shape, seed color, embryo shape and embryo position) and total flavonoid contents. The entire data were analyzed descriptively.

The research findings indicated morphological differences between *Basella rubra* and *Basella alba* in root color, stem shape, growth direction, stem color, leaf color, flower color, and fruit shape. In terms of total flavonoid content, the stem of *B. rubra* exhibited the highest concentration, with a value of 39.53 mg QE/g, whereas the stem of *B. alba* only contained 21.31 mg QE/g.

Key words: flavonoid, morphology, red gendola, white gendola

